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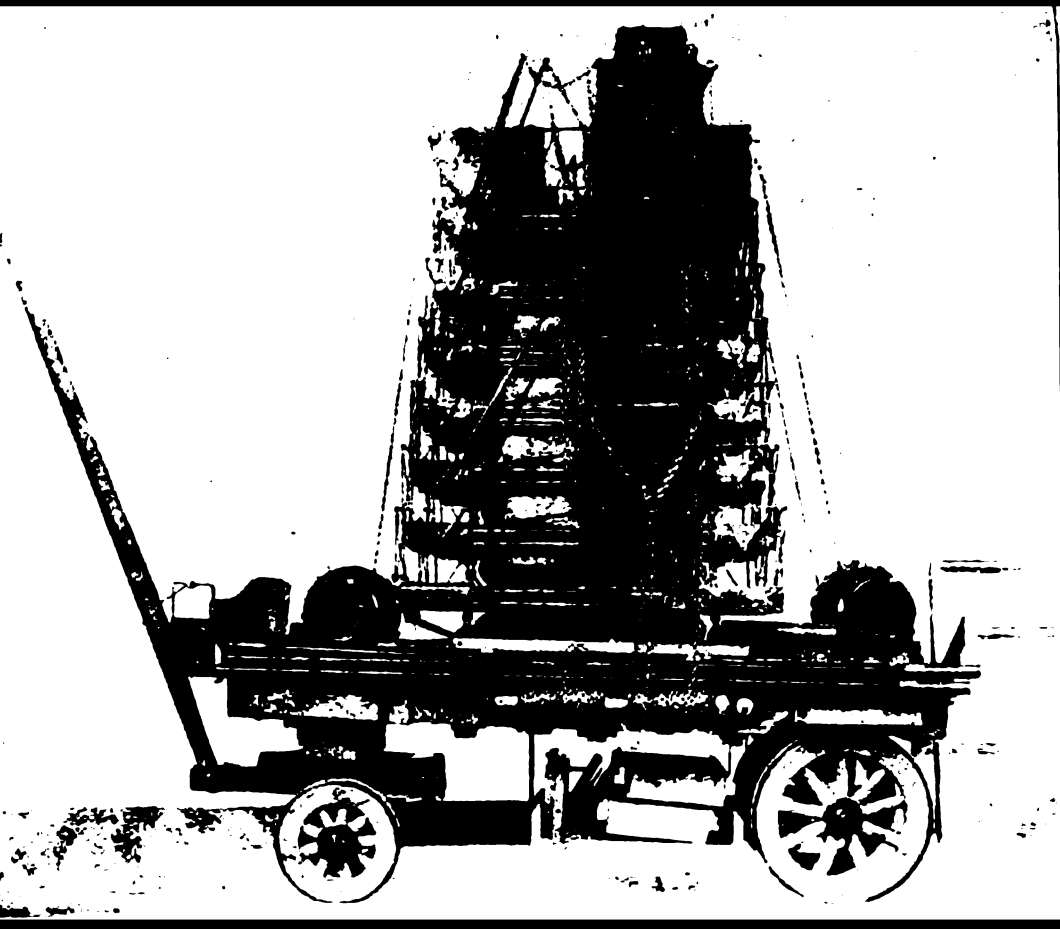

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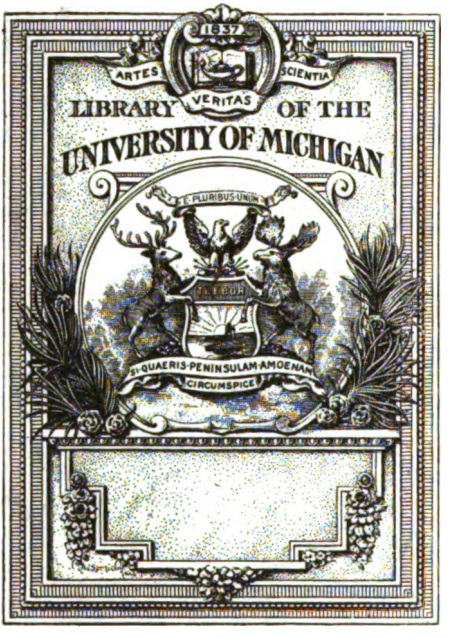

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DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF MANUFACTURES

MONTHLY CONSULAR AND TRADE REPORTS

SEPTEMBER, 1905
No. 300

WASHINGTON
GOVERNMENT PRINTING OFFICE
1905

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MONTHLY CONSULAR *and* TRADE REPORTS

Washington, D. C. SEPTEMBER, 1905 No. 300

LABOR.

WAGE EARNERS.

COMFORTABLE HOMES IN EUROPE.

THE KRUPP COLONIES AT ESSEN—DWELLING AND APARTMENT HOUSES IN GREAT BRITAIN—LIFE SAVING IN MINES.

Consul Ernest L. Harris, of Chemnitz, Germany, furnishes a highly interesting report on the houses and villages constructed by the firm of Friedrich Krupp at Essen for the comfort of those engaged in the Krupp works. The illustrations of the several types of houses and villages are given, the illustrations having been loaned the Bureau of Manufactures by the Krupp firm. The report follows:

Of all concerns in Germany, whether it be large manufacturing establishments, municipal bodies, charitable organizations, building and loan associations, or private speculators, no one is doing more to provide comfortable houses and cottages for the laboring classes than is the firm of Friedrich Krupp. A description of the colonies founded in Essen by this great manufacturing establishment can not fail to be instructive to the laboring people of America, as well as a subject of the deepest interest to the public at large. These colonies are as follows:

CRONENBERG

Is situated at a distance of 110 yards west of the factory. It is composed of 8 long and 10 intersecting streets. There are 221 massive three-storied buildings, containing 1,572 independent living apartments, in which 8,000 people are housed at present. Surrounding each house is a small garden, which is used as a place for drying newly-washed linen and as a playground for children. In the middle of the colony there is a market place, in which stands a music pavilion, where public concerts are given once a week. The colony also has a public school and a large park.

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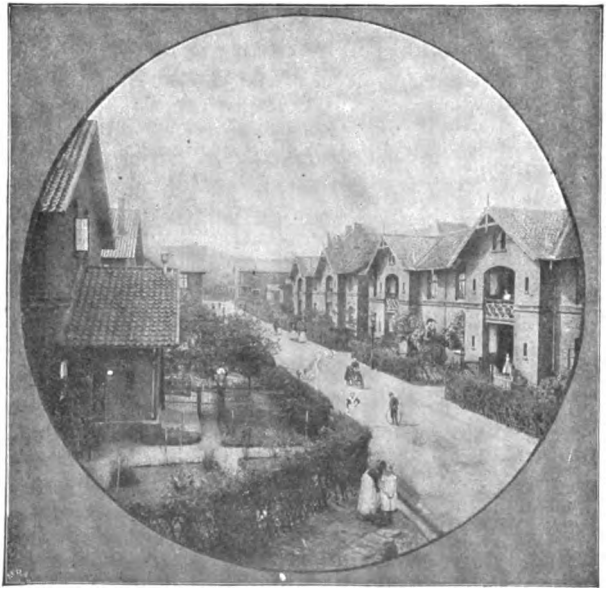
SCHEDERHOF

Is composed of 82 houses arranged for 6 families each. There is a total number of 492 apartments, consisting of from 2 to 4 rooms. In

No. 1.—Cronenberg colony.



No. 2.—Baumhof colony.

addition there are 280 so-called barrack lodgings, which are built principally of timber.

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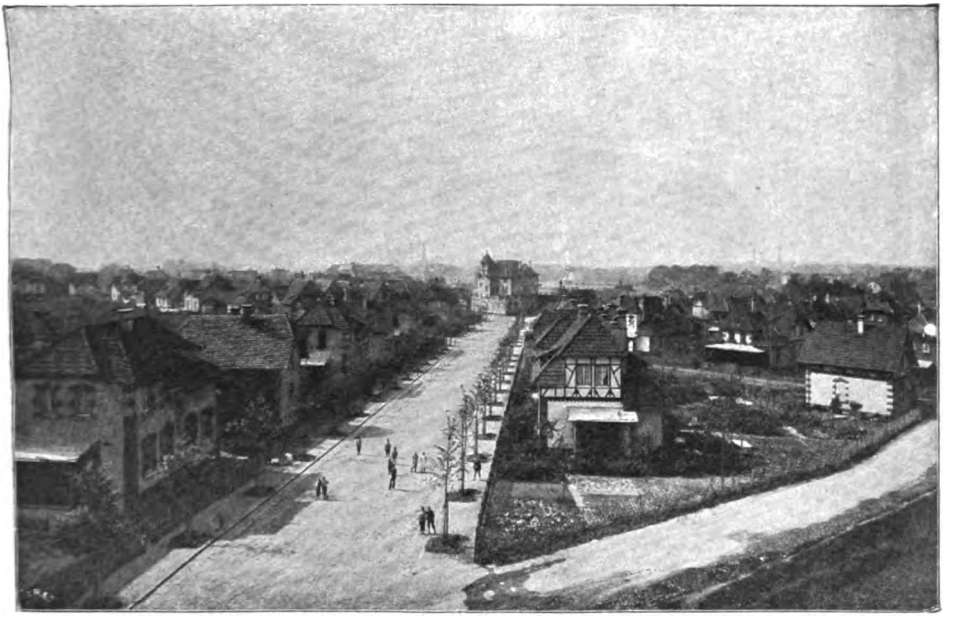
BAUMHOF

Is situated in the southern part of the city of Essen, about twenty minutes walk from the factory. The houses are all built after the cottage system, consisting altogether of 154 independent apartments, with from 3 to 5 rooms each. Each house is intended to accommodate from 3 to 4 families.

ALFREDSHOF

Is being built entirely after the cottage system, and when completed will number 500 houses, and each is intended to be occupied by 1 to 2 and even 4 families. Each cottage is built in the center of a garden, and has a separate entrance from the street.



No. 3.—Alfredshof colony.

WESTEND

Is situated directly in the neighborhood of the fire department building. The colony consists of 232 apartments, with from 2 to 5 rooms.

FRIEDRICHSHOF

Is about fifteen minutes' walk from the factory, and is the youngest of all the colonies. It is different from the others to the extent that the houses are grouped about a large court, and for the most part consist of three stories. The court is laid out like a garden, making an excellent playground for children. The total number of separate dwellings amounts to 200, each consisting of 3 to 5 rooms. In addition to this colony the Krupp firm has purchased a large number of

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houses in the city of Essen, which have been fitted out and let as dwellings to workmen. There are 600, all told.

No. 4.—Friedrichshof colony.

No. 5.—Altenhof colony.

ALTENHOF.

This colony is one of the many monumental philanthropic enterprises which characterized the life of F. A. Krupp. It is devoted entirely to

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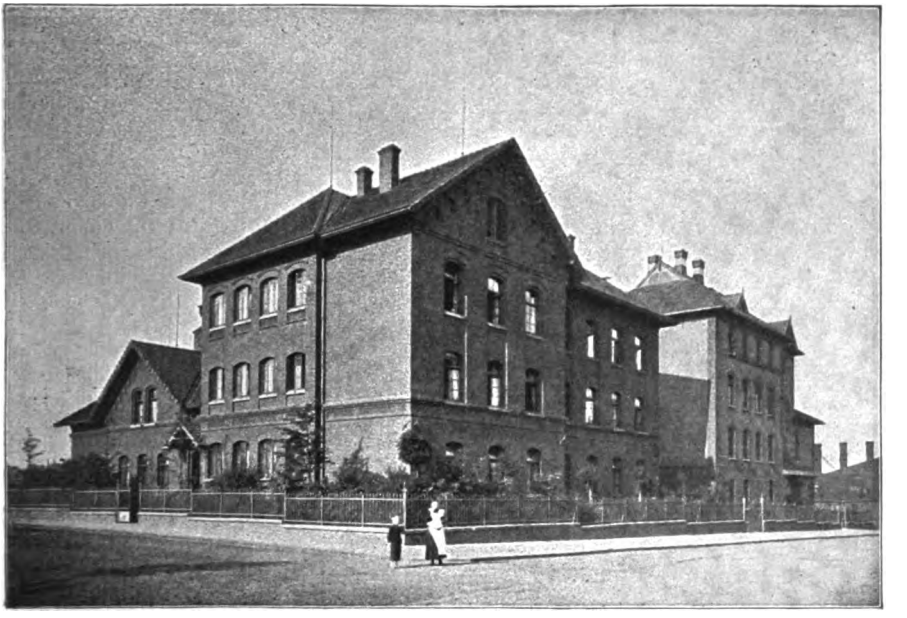
the use of invalid workmen. They are housed here for life, and are exempt from the payment of any rent whatsoever. The colony is built after the cottage system and consists of 159 dwellings for invalids, as well as 24 independent two-roomed apartments for widows. There is a Protestant and Catholic chapel in which church service is regularly held. A basket-weaving house industry has been introduced, with the object of enabling the invalids to earn something in addition to their pensions. The colony is situated on the edge of a forest far away from the smoke and noise of the factory.

DWELLINGS FOR BACHELORS.

In the neighborhood of Schederhof colony there are 2 dwelling houses, each containing 30 apartments of 1 to 2 rooms, which are occu-



No. 6.—Dwellings for unmarried skilled workmen.

pied by unmarried skilled workmen or specialists. In each house there is a mutual dining room, library, wash and toilet rooms. A bowling alley is also connected with each. The occupants of each house manage their own affairs independently, and they choose the wife or widow of one of the workmen belonging to the factory as a housekeeper.

For unmarried workmen and those who have their families at a distance there is a large boarding house which will accommodate about 1,000 men. The sleeping rooms each contain from 8 to 10 beds. At noon the meals consist of beef, pork, and sausage, from which the workmen may have their choice, in addition to soup. The evening meal consists chiefly of sausage or fish. The daily price paid by each person for bed and board is 20 cents.

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EXTENT AND VALUE OF ALL THE HOUSES.

Taking all the colonies into consideration, there are 1,660 houses of 2 rooms each, 1,869 houses of 3 rooms each, 448 houses of 4 rooms each, 150 houses of 5 rooms each, 63 houses of 6 rooms each, and 84 houses of 7 rooms each, making a total of 4,274 houses. At the present time these houses are occupied by 8,212 workmen and their families, which number no less than 18,466 persons, making a total of 26,678 people actually housed by the firm. Three years ago the total number of workmen employed by the Krupp establishment in Essen alone was 25,016. Therefore about one-third of the total number employed live in the colonies already described.

The value of all the dwellings, including lots, etc., situated in these colonies amounts to $3,875,000. The price demanded of the workmen for the different apartments is as follows:

Size of apartment.	Price paid per annum.
Two rooms (barrack)	$14.00-$21.00
Two rooms	21.00- 25.00
Three rooms	28.00- 52.00
Four rooms	40.00- 76.00
Five rooms	64.00- 95.00

The rate of interest received upon the capital invested amounts to about 4 per cent. After deducting taxes, cost of management, repairs, and an annual sum set apart as a sinking fund the interest amounts to 2.5 per cent per annum.

COMPARISON WITH AMERICAN HOMES.

A recent article in an illustrated German weekly entitled "Das Leben," by Prof. Werner Sombart, of Breslau, a writer of note on political economy, has attracted universal attention throughout the Empire. The author's knowledge is based upon a study of actual conditions in the United States, and his comparison between the way in which the American and German laborer lives is highly instructive. Sombart says in part:

"To begin with the most important factor, the American laborer has better dwellings than his German colleague. The average number of rooms occupied by an American workman and his family is 4 to 5. In Germany the average is only 2. The price paid in America for the larger dwelling is actually not greater than that paid for the smaller one in Germany, and wages in America amount to two or three times as much as in Germany. The interior of a workingman's home in America also looks more cheerful. The sum paid out by the average American workman and his family for new articles each year to render his home more cozy amounts to $31, while that of the 44 working families of Nuremberg amounts to only $4 or $5 on an average."

Sombart is of the opinion that the American laborer's family not only lives better than that of the German laborer, but that conditions generally are also much better than that surrounding the workingman's family in any country of Europe, not even excepting France or England.

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Without assuming to affirm or deny these statements I take it for granted, however, that they apply more particularly to that class of working people in Germany which shifts for itself, that is, those who do not live in houses which belong to building and loan associations or such as are provided by certain large manufacturing establishments for their workmen. Speaking generally, there is no question but what there still remains much to be done for this particular class of laboring people all over the German Empire. During the past ten years a great improvement has taken place, however, in the conditions surrounding the dwellings of those who must depend upon themselves for securing suitable places to live in. The increased attentions on the part of municipal authorities to sanitary arrangements and the police laws against too many persons occupying one room have had a salutary influence. My object in writing this report is to show, in a general way, what is being done in Germany for workingmen's homes, and to convey some idea, at the same time, of how it is being done.

HOMES OF BRITISH WORKMEN.

EFFORTS BY MUNICIPALITIES TO HOUSE LABORING CLASSES.

Consul-General Harris supplements the foregoing with the following report of efforts being made in England to properly house the working classes. Past efforts of the authorities in this direction are commended and compared with like efforts of Continental Europe and the United States. Mr. Harris writes:

Within the past few years the question of housing the working classes in England has forced itself upon the attention of many municipalities, large land owners, and great employers of labor. The municipalities in England are at present working along one of two lines. The one is the clearing of unsanitary areas and rehousing the people in large tenements, and the other is the building of working-class cottages on the outskirts of the town or beyond the limits of the town. Under the so-called housing of the working-classes act of 1890 local authorities have the power to condemn and clear large slum areas and rehouse the persons so displaced. In London the work must be done to the satisfaction of the home secretary, but in all urban districts to the satisfaction of some local government board. This act further permits money to be borrowed with the consent of local boards, the period of repayment not to exceed sixty years. With this money, land may be acquired compulsorily and cottages or houses built to house the artisans. In England over one hundred towns or district councils have adopted part of the housing of the working-classes act. Some of the largest cities in Scotland have carried out extensive housing schemes. Similar experiments have been made in Ireland, but not under the above-named act.

CLASSIFICATION OF DWELLINGS.

The housing of laboring and poor people in England may be divided into five classes, namely, common lodging houses, block dwellings, tenement houses, cottage flats, and cottages.

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Common lodging houses.—These have been defined as houses that receive all comers, and especially those of an itinerant class. They are lodging houses in which persons of the poorer class are received for short periods, and although strangers to one another, are allowed to inhabit one common room. In 27 large towns 2,857 common lodging houses were registered in 1899, providing accommodation for 54,308 persons. It is the duty of every local authority to keep a register of common lodging houses. The local authority may also refuse a license where either the house or the keeper are deemed to be unsatisfactory. Each house must have a notice with the words "registered lodging house" on the outside. In the first week of April and October the keepers of such houses must limewash the walls and ceilings to the satisfaction of the local authorities.

Block dwellings.—In regard to this particular class of dwellings, Thompson, in his Handbook, says:

"The block type of dwelling owes its origin largely to the many obstacles which formerly stood in the way of outward or horizontal expansion of cities and thus compelled a large population to be housed on a limited area. The fortifications and walls of large cities, especially on the continent, acted for many years like a band or cramp constricting the suburban growth of the city proper, and, although most of these cities have recently grown enormously since the fortifications have been moved outward and the walls demolished, other causes have still hampered extension. Foremost of these has been the lack of full facilities for cheap, rapid, and easy transit to and from the center and the surrounding open country; but this has been coupled with, and accentuated by, the difficulty of obtaining land at a reasonable price and under proper conditions in the belt immediately adjoining the suburbs. This restricted and costly supply of land has acted like a physical wall round every large town so far as proper suburban expansion has been concerned.

RESULTS OF RECENT DEVELOPMENTS.

"Recent developments point to the breaking down of the transit difficulty, but the old type of building has persisted so long that the organization of large towns has in many cases become stereotyped in the direction of inward concentration, and upward rather than horizontal extension. Under these circumstances it is not to be wondered at that 'model housing,' beginning as it did in the large cities, took the form of overcrowding an area by providing or encouraging the provision of too many rooms on too little land.

"Although such block dwellings are the rule in most large continental cities, they have not been established as the normal type of dwelling in large towns in England; but the practice of clearing insanitary areas has handicapped local authorities by compelling them to secure new accommodations for rehousing on very dear land, and as a consequence, to make the most of a small area by building block dwellings. In this way various companies to a great extent, and local authorities to a small extent, have housed some 250,000 persons in London in more or less objectionable homes of this kind. About one-fifth of these are bad or very bad from the standpoint of light, air, and sanitation, but even the best are often injurious to health, especially in the cases of young children. Speaking generally, they tend to establish a low standard of decency and comfort, especially where

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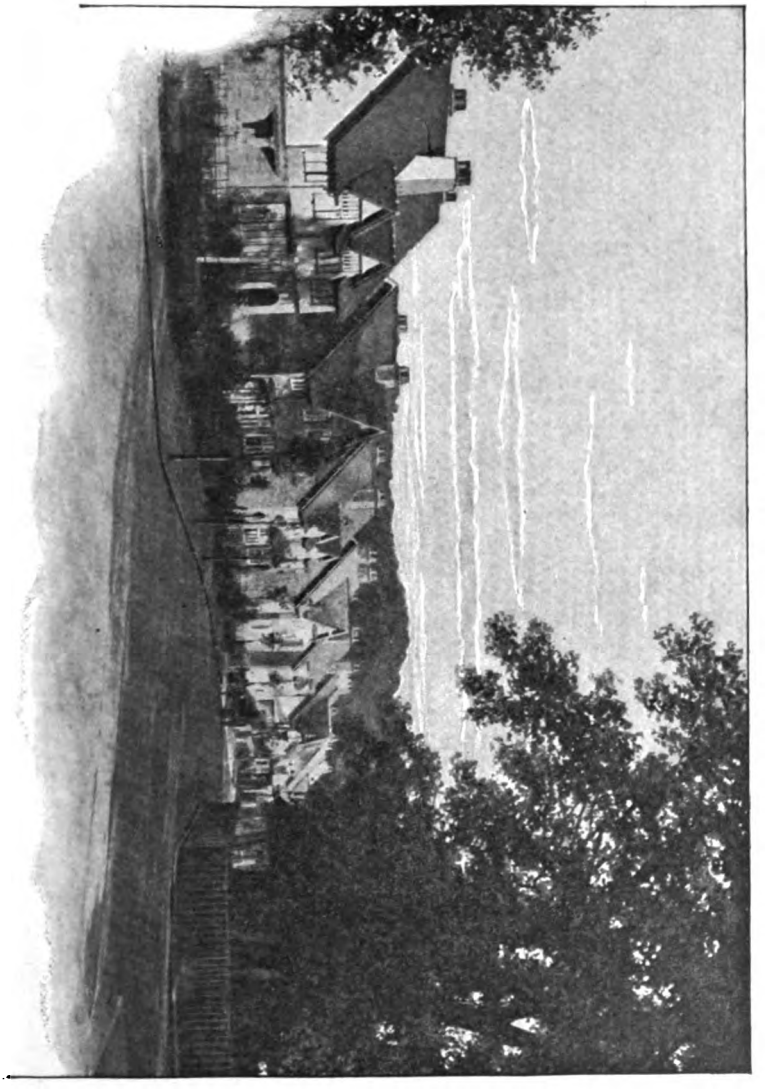
there is a small number of rooms; they add enormously to the exertion of going to and from home and work; and they place undue obstacles in the way of access to fresh air and outdoor recreation in the case of women and young children, who find the arduous climb up even



Bournville Village Trust. (Linden Road.)

three or four flights of stairs a serious matter when not in robust health.

FAVORITE TYPE OF DWELLING.

"The favorite type of block dwelling is four or more stories high, and contains tenements of one, two, three, or four rooms, more or less complete as separate dwellings, packed together and piled up on a

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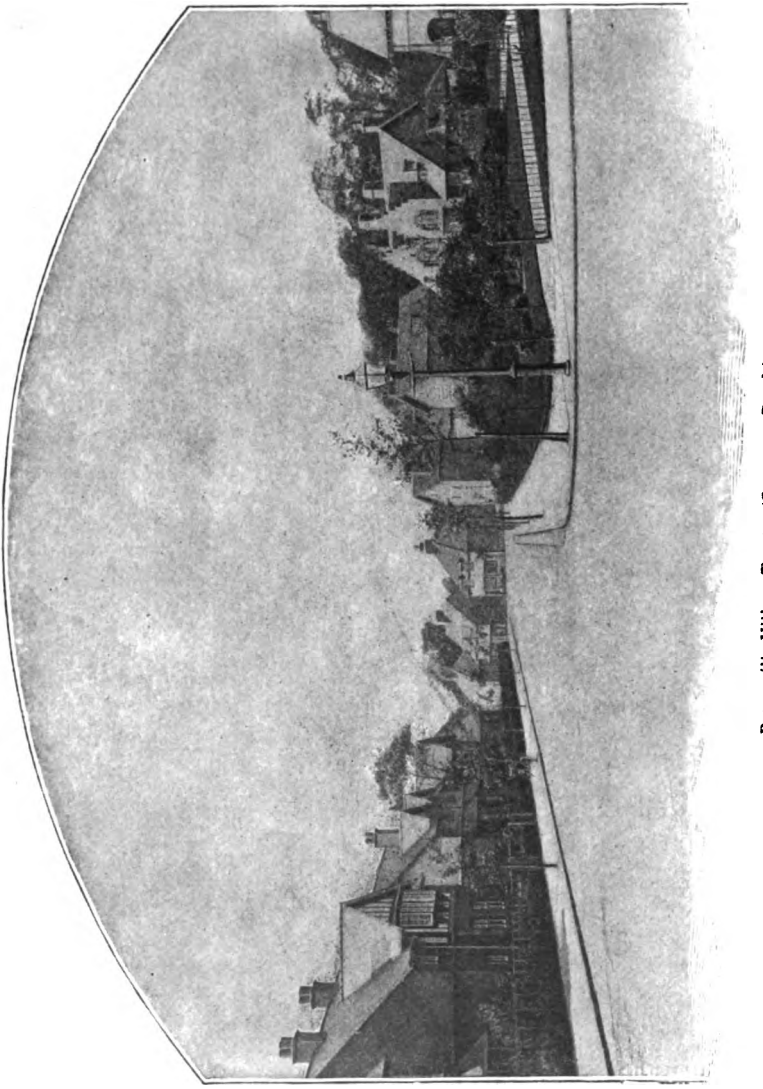
limited area, with no gardens and no separate yards, but with common passages and staircases, and an absence of all privacy outside the room door. Each block is generally in charge of a caretaker or superintendent, and the common passages are sometimes lighted, cleaned, and controlled by him. These block dwellings consist mainly of two classes:



Bournville Village Trust. (Sycamore Road.)

First, those which have the appurtenances, such as washhouses, sculleries, and water-closets in common for several families; second, those which have their own separate appurtenances, and are self-contained in every respect except the approaches."

Block dwellings have been erected in Edinburgh, Glasgow, London, Shoreditch (a borough council in London), Liverpool, Manchester, and

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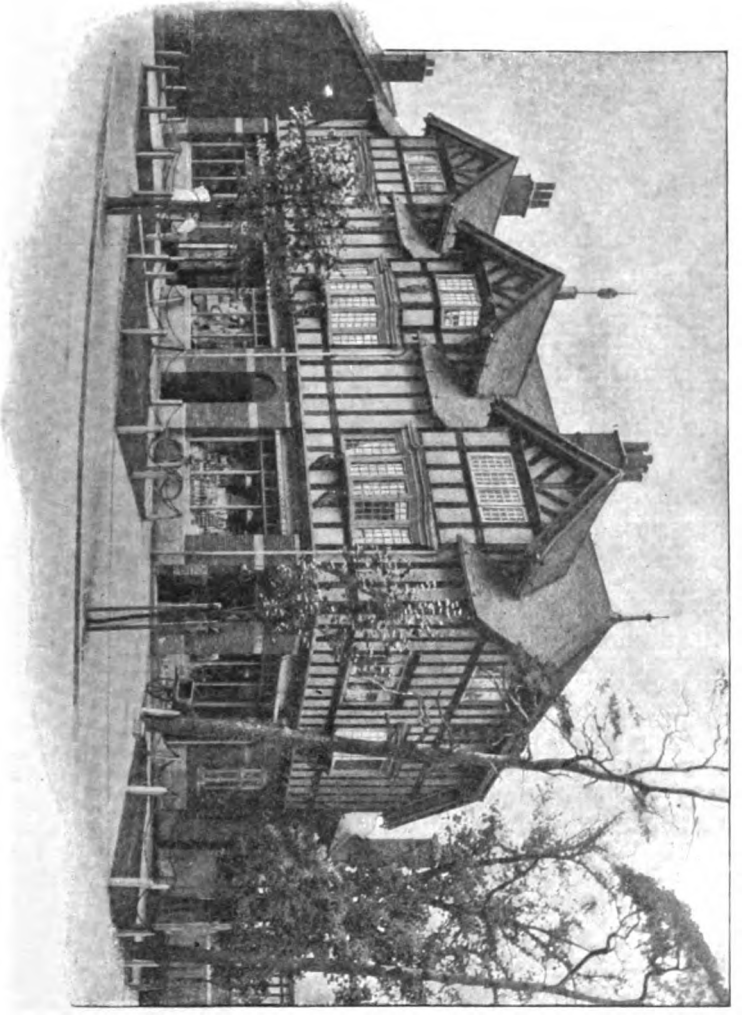
Nottingham. The London county council has built 3,477 dwellings with 8,456 rooms, and 133 shops, sheds, workshops, etc., on about 28 acres of land purchased for this purpose. The buildings cost $4,300,000, and the sites $700,000. The average number of rooms per dwelling is 2½, the great majority being 2 or 3 room dwellings. The rents average about 75 cents a room per week. The most noticeable experiment



Bournville Village Trust. (Shops.)

in building dwellings is that of the London county council called the Boundary Street area.

Scotland has built 17,040 block dwellings, with 3,167 rooms, an average of 1½ rooms per dwelling, at a cost of $2,065,225. The rents average about 60 cents a room per week. In England and Wales, excepting London, there are over 1,000 block dwellings, with 2,193 rooms, costing $950,000 for building and $142,500 for sites. As the London county

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council has erected more block dwellings than any other authority, and as these dwellings have had to be designed under hygienic conditions imposed by government departments in addition to the requirements of the building acts, it may be useful to give some details with regard to the various types of dwellings.

DETAILS OF THE SEVERAL TYPES.

The blocks are built of bricks, and usually consist of four square stories with a mansard, each story about 8 feet 6 inches high. The earliest blocks were finished with flat roofs, to be used as playgrounds and drying grounds for clothes, but the noise made the former objectionable, and the dirt spoiled the clothes. There is a clear open space of at least 40 feet at the rear. The ground-floor level is usually a foot or more above the pavement, but some have half basements with sunk areas front and rear. The front elevation was plain and square at first, but afterwards the outlines were more varied, and by the use of bricks of different colors or terra-cotta bricks some variety of appearance was obtained, although at some extra expense.

The staircases are from 6 feet 6 inches to 7 feet 6 inches wide for two flights, and are ventilated through windows or other apertures direct to the open air; internal staircases being strongly objected to. It is preferred that the entrance should be at the rear. The floors are all fire resisting and constructed of coke breeze and cement, carried by steel joists with wide flanges, which hold the concrete, and covered with thin floor boards nailed down close. They are thinner than wood floors, saving a course of brickwork in the height of walls. Thorough ventilation is insisted upon, and no bedroom may be connected with any other bedroom, but is generally entered from the living room. Dust shoots are not provided, but each tenant has a dust receptacle, the dust from which may either be emptied into the dust bin in the common yard at the rear or collected by the municipal dustman. Each self-contained dwelling has its own scullery and closet, but there is a great variety in the nature and arrangement of the office accommodation allowed to each tenant. In the self-contained dwellings every desirable part is inclosed within the entrance door. The closets are cut off from the tenement by an open lobby, and are not entered from the scullery, as in the case of many older artisan's dwellings. The number of rooms approached on each floor by one staircase is usually from five to six in the case of self-contained dwellings, but in some ten rooms per staircase on each floor have been provided at the cost of a slight sacrifice in thorough ventilation and a small waste of space in internal passages.

THE GALLERY PLAN.

Balcony dwellings on the gallery plan have been erected in some few towns. All the tenements are approached from galleries that extend along the front of each story. The block is perfectly rectangular, the planning is most simple, and one staircase will serve a large number of dwellings. The balcony system has been objected to on the ground that it obstructs direct sunshine and is too much exposed in the higher stories, especially in bad weather. The associated dwellings have detached closets and sculleries arranged in a corridor, but in nearly

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every case there is a separate water-closet for each tenant, and often a separate scullery, so that the economy derived in similar undertakings elsewhere, by having one water-closet and one scullery between four or more tenants is not secured to any great extent by the city council. With this arrangement, however, it is possible to get as many as thirteen rooms on each floor approached from one staircase, and although there is rather a large proportion of passage and only one

Bournville Village Trust. (Holly Grove.)

line of living rooms in part of the block, yet these uneconomical conditions are a little more than balanced by the saving of staircase space and construction.

TENEMENT HOUSES.

About eight towns in England have erected such tenement houses. By tenement houses only three-story buildings are understood. The cities of Liverpool and Sheffield have made two experiments with such houses. The abnormally high death rates in Liverpool, especially

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infant mortality, finally stimulated men and women of all classes and opinions to put forth every effort toward effecting a much-needed improvement in the homes of the people.

These dwellings are of three types. They are all uninviting in appearance. Type F houses, of which twenty-one have been built, are arranged in blocks three stories in height, each house containing a tenement of two rooms on every one of the three floors. The ground-floor tenements are entered directly from the street, and the upper tenements from a common balcony running along the rear of the house at the level of the first floor. There is an open yard on the

Port Sunlight. (Picturesque but insanitary and single-bedroom cottages demolished.)

ground level to be used only by the occupants of the ground-story dwelling, and there is a small yard at the level of the first floor, in the rear of the building, common to the occupants of the first and second stories. The frontage of each house is 15 feet and a depth of 21 feet. The house is not quite the height of the width of the street which it faces, and at the rear there is a narrow roadway at an angle of 45°, from which rises the height of the building. This type of house is for the very poorest classes. Type H is similar, but has the entrance direct from the staircase.

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A NEW STYLE.

Another type, of which only two have been built, is the same height, but the ground story contains a tenement of four rooms and each of the upper tenements two rooms. The entrance to the upper flats in this case is obtained by the same doorway as to the ground-floor dwelling. The houses are larger, the frontage being 23 feet 6 inches, the depth 24 feet, and the area 63 square yards. The same arrangement has been followed in the rear for providing yards and air spaces. Five houses have been erected of type G. The ground floor in each of these contains a tenement of three rooms, while each of the upper stories contains a tenement of two rooms. The entrances

Port Sunlight. (Cottages with three to five bedrooms erected on same site.)

are the same as in the house last described, and the same arrangement has been followed in the rear of the building. The frontage of each house is 20 feet, the depth 18 feet, and the area 40 square yards. These houses are situated in the most crowded part of Liverpool, namely, the Scotland Yard, where the death rate is 40 per 1,000. It is packed with a dense population, all very poor. The cost of clearing the site was $5.50 per square yard. The rent of the cheapest two-roomed dwellings is 60 cents per week for two rooms. The tenements belong to a very poor class, and the houses are greatly in demand.

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COTTAGE FLATS.

Eleven towns in England have built cottage flats, the two most important being Plymouth and East Ham. In these eleven experiments there are 141 two-roomed, 232 three-roomed, and 148 four-roomed dwellings. They are let at an average rent of 35 cents a room per week. Cottage flats are two storied, self-contained dwellings, with one upper flat and one lower flat, somewhat like two-story tenement houses, but they have separate access to the street, and are each occupied by only one family. Some have balcony access, but others have separate front doors and back stairs, with separate yards or gardens.

SEPARATE COTTAGES.

As far as the cottage class of dwellings is concerned, 31 local authorities, including 2 rural councils, have built cottages for the working classes. There are, altogether, 1,643 dwellings, with 7,599 rooms. They cost about $230 per room for building and about $42.50 for site; that is to say, about half the cost per room of building block dwellings. They are rented at from $20 to $40 per year, 583 being rented at $25 and $30. The London county council is engaged at present in building a whole township of these cottages at Tottenham, outside London. These are provided in the shape of two-story, self-contained dwellings on separate sites, occupied by only one family, and provided as a rule with a separate yard or garden. The expression "cottage" is understood to include a garden of not more than half an acre, provided that the estimated value of such garden shall not exceed $15.

WORK OF BUSINESS FIRMS.

This is just a mere outline of what has been and is being done by the municipalities in England. Mention should be made of what two great business establishments are doing in the way of housing their working people. The work of W. H. Lever at Port Sunlight, and the work of George Cadbury at the village of Bournville, is especially worthy of notice. The area upon which Port Sunlight stands consists of 140 acres, and 97 out of every 100 houses are built on the cottage plan. They have a garden as a foreground to the cottage and screen from the road. The care of these gardens is not left to the people who occupy the dwellings, but they are looked after and kept in order by the management. This secures to the gardens and the whole village one uniform character. Experience has taught that this is the best plan, for one unsightly or neglected garden would mar the whole effect. To every block of cottages there are what is known as allotment gardens. These gardens are intended for the tenants to raise vegetables or to fence in poultry. They are situated as near as possible to each cottage and afford to each tenant the means of healthy recreation. The capital expended in buying the 140 acres of land already referred to, and in building the cottages, houses, schools, shops, institutions, clubs, etc., including the making of roads, and the laying out of parks, has been more than $1,750,000. Upon this sum the firm of Lever Brothers (Limited) receive no interest or financial return whatsoever. The rents are fixed at such an amount as only to

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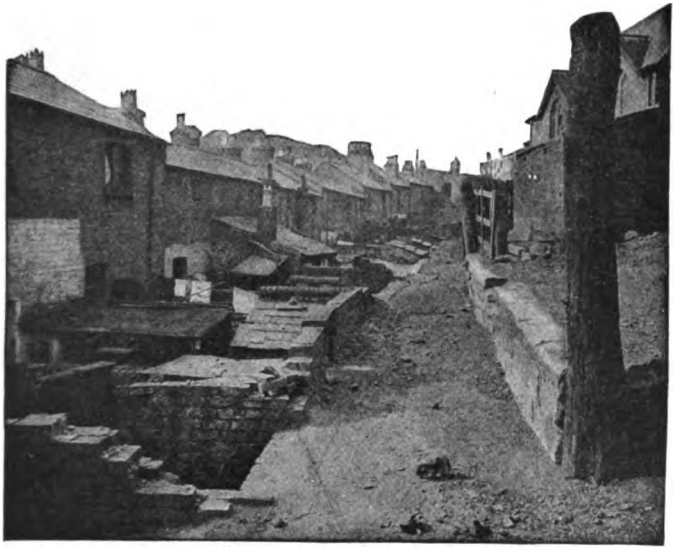
pay for maintenance, taxes, and repairs. The rent for each ordinary cottage is $1.25 per week.

A VALUABLE GIFT.

In this connection the village of Bournville is equally worthy of praise. Its founder, Mr. George Cadbury, in a deed by which the property was handed over to a board of trustees, clearly set forth his object and wishes. Therein is stated that "the founder is desirous of alleviating the evils which arise from the insanitary and insufficient accommodations supplied to large numbers of the working classes, and of securing to workers in factories some of the advantages of outdoor village life, with opportunities for the natural and healthful occupation of cultivating the soil. The object is declared to be the ameliora-



Port Sunlight, Primrose Hill. (Old property on the estate demolished.)

tion of the condition of the working class and laboring population in and around Birmingham and elsewhere in Great Britain by the provision of improved dwellings, with gardens and open spaces to be enjoyed therewith." This gift to the people, including all donations, is valued at about $1,000,000. It consists of 458 acres of land and the village of Bournville. The revenue, whether from house and farm rents, ground rents, or any other sources, is paid to the trustees, and employed by them, after making provision for the repair and maintenance of the property, in building more houses and further developing the estate. The gift is therefore absolute, none of the revenue returning to the donor. At the present time the village consists of 518 houses, with a population of over 2,000. Bournville is not reserved entirely for the use of the employees of Cadbury Brothers. It is intended on the whole

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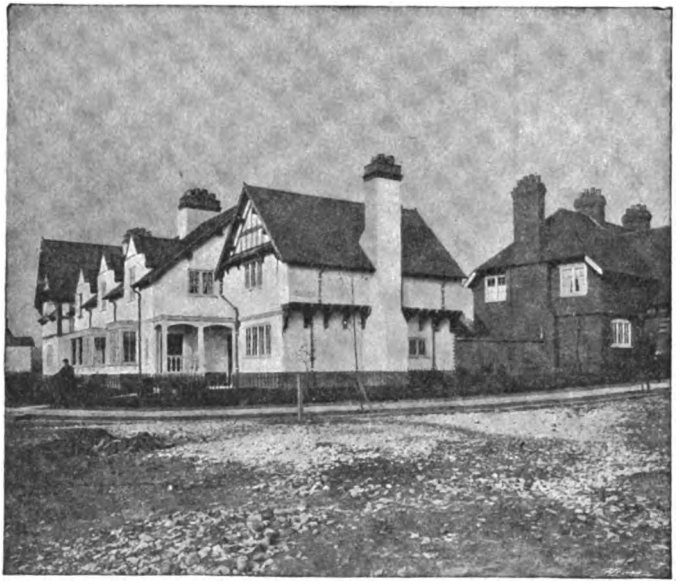
as a contribution toward solving the housing problem, and one-half of the tenants of the village find employment in Birmingham. The roads of the village are 42 feet wide and are all planted with trees. The average garden space allowed to each house is 600 square yards.

A HIGH STANDARD.

In summing up the results of the housing question, Thompson, in his Housing Handbook, comes to the conclusion that England has not very much to learn from either the United States or any continental country in the matter of housing the working classes. There are, he says, some exceptions, but as a rule the standard of domestic sanitation and of



Port Sunlight, Primrose Hill. (New cottage now occupying same site.)

housing accommodations generally is lower in foreign countries than in England. Without affirming or denying this assertion I wish to state that in 1902 it was my privilege to visit many of the dwellings occupied by our working people in the United States. During this extended trip I visited nearly all the large industrial centers in the Eastern, Central, and Southern States. Taking the country as a whole I am satisfied that there is a great field for philanthropy of this kind. There is nothing in the world which makes a man so happy, in the long run, as to have a neat home; and W. H. Lever, George Cadbury, Alfred Krupp (deceased), and John H. Patterson are discovering a way to secure human happiness by their splendid efforts in housing their help. Their philanthropy is the kind that will be world-wide in its influence.

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LIFE IN THE MINES.

INVENTION TO GUARD AGAINST DEADLY GASES.

The following report from Consul Harris, of Chemnitz, describes an apparatus to prevent disasters so frequent in the mining industry, which apparatus is the invention of two scientists of the Polytechnical University of Vienna. The photographs to illustrate the apparatus were loaned the Bureau of Manufactures by the management of the German mining journal "Glückauf," of Essen. The report follows:

The ever-changing conditions which surround the great mining industries of to-day in every part of the world are caused for the most part by the introduction of new inventions in machine technology, which strive to attain two objects, namely, an increase in output and a decrease in the cost of production. It is probable that this policy intensifies the risks attendant to those laboring men who spend a great part of their lives in an occupation which exposes them to continual danger. In order to prevent accidents in the mining industry every possible precaution is taken to avoid catastrophies by the use of rescue stations, various apparatus, and even especially trained rescue corps held in reserve. The most useful inventions in this respect, however, have been those which attempt to eliminate the dangers accruing from poisonous gases generated by explosions, etc. One of the latest and most promising inventions in this connection is one by Professors Bamberger and Böck of the department of science, Polytechnical University of Vienna. This apparatus is based upon the principle of producing the oxygen required for breathing by means of the exhalation products themselves, by filtering them through a porous layer of sodium-potassium peroxide, whereby the exhaled products, carbonic dioxide and vapor of water, are absorbed. There are two types of apparatus, one for continual use while at work and another for use in the moment of danger.

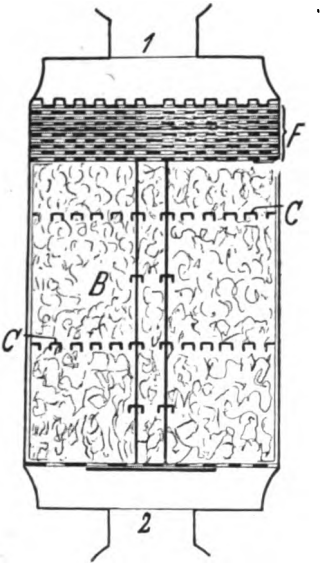

FIG. 1.—Box containing sodium-potassium peroxide.

The first type will permit a man to breathe in any irrespirable atmosphere for about one hour, thus giving any miner ample time to save himself from suffocation. The apparatus consists of a frame provided with a hose, mouthpiece, and a bag sufficiently large to hold a box which contains the layer of sodium potassium, mentioned above (fig. 1), together with the necessary filters. The apparatus can be kept in reserve for years, only requiring to be examined from time to time in order to see if the different rubber parts are in good condition, and whether the lead plates which hermetically close the box are not injured.

The tin cylinder is clamped between the perforated crowns K_1 and K_2 in figure 2. At the bottom there is a dust-collecting chamber, while

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a hose with the mouthpiece is attached to G thus completing the circuit. When taken from its case for use the bag of the apparatus is filled by vigorously blowing into the mouthpiece, after which it is placed between the lips and teeth, and a clamp adjusted to the nose. During the first 3 minutes' breathing, either sitting or standing, one

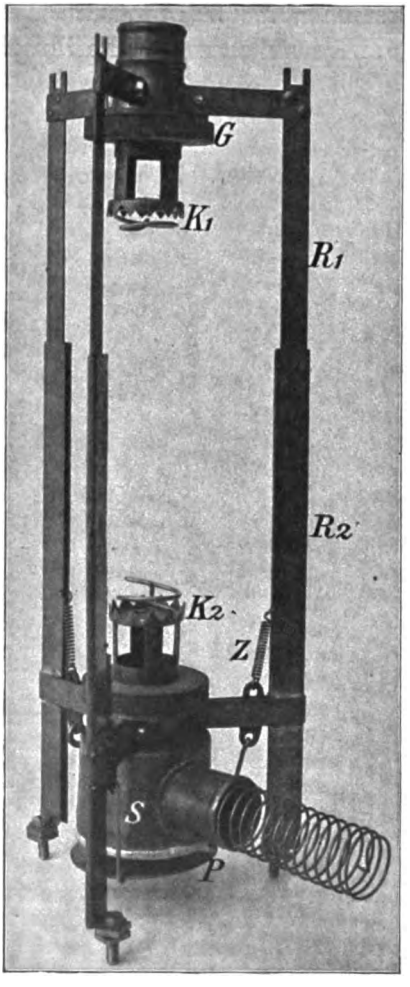

FIG. 2.—Frame of apparatus.

should keep quiet until the apparatus is warm, whereupon moderate motion such as walking, ascending ladders, stairs, etc., can be attempted. It is claimed that a man can breathe about 100 minutes when he keeps quiet, and 30 or 40 when he is in motion. It is calculated that a man can walk a distance of 1¼ miles in that time.

The entire apparatus is inclosed when ready for use in an insulating covering, J (fig. 3), which consists of two braided pasteboard cylinders. It can be cleaned and recharged by carefully removing the box from

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the perforated crowns, so that the sheet-lead plates will not be injured. The dust-collecting chamber at the bottom of the apparatus, to which the bag is attached, must be carefully cleaned from any carbonate particles that may have entered into the same. For this purpose three nuts at the bottom of the insulating covering may be unscrewed, thus releasing the frame. The screw of a disk carrying the clamping pawls may then be removed, and after the bottom of the dust-collecting

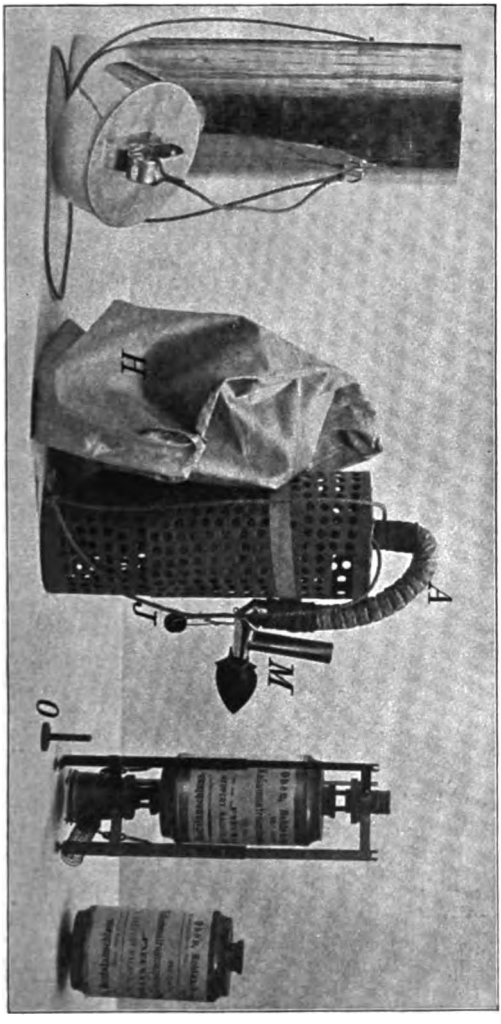

FIG. 3.—Component parts of apparatus.

chamber has been unscrewed every particle of carbonate should be wiped out by means of a wire brush or emery paper, care being taken, however, that such particles do not fall in the bag. The perforated crowns should also be carefully cleaned. It should always be borne in mind that the cleaning must be done in a dry state, and that the bottom of the dust-collecting chamber must also be firmly screwed in, so that the apparatus will be perfectly air-tight. In readjusting the

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box to the perforated clamps care should be taken to bring it accurately into position.

Type II is designed to permit a man to breathe for a period of 90 minutes, 60 minutes being counted for work and 30 for retreat from the locality filled with irrespirable gases. It consists, as is shown in fig. 4, of three boxes supported in a frame, each containing the same amount of sodium-potassium peroxide as in apparatus Type I, already described. There is a large bag made in the form of a jacket which permits the bearer to conveniently find his way through the narrowest passages to safety. In order that the apparatus may be used at once in case of heavy work to be performed by the wearer, it can be filled with about 8 quarts of oxygen generated for this purpose in the oxygen producer T and the filling tube N. The oxygen is obtained by the reaction of water upon the sodium-potassium peroxide contained in the producer.

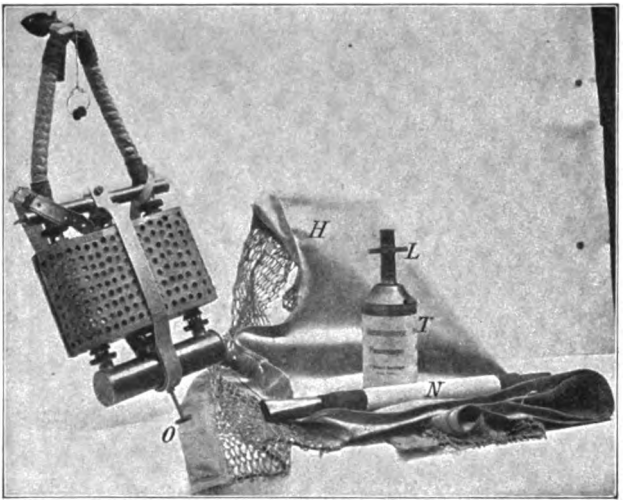

FIG. 4.—Apparatus, Type II (complete).

The apparatus, which may be deposited either in a hanging or lying position, must be prepared beforehand for use. The boxes should be placed in the supporting frame within the insulating covering in such position that the sheet-lead plates are in contact with the perforated crowns without being injured by them. Care should be taken that the boxes are in proper position—that is, hose-connecting joint uppermost and bag-connecting joint lowermost. When the apparatus is ready for use the jacket is placed on the body with the unperforated side of the insulating covering toward the breast, the supporting frame being hung on the neck and locked in position by a leather waistband fastened by an aluminum buckle. Care should be taken that all the joints are screwed tight. The bag is then filled through the mouthpiece with about 8 quarts of oxygen, either by means of the oxygen producer and tube already mentioned, or may be pumped in by any steel cylinder containing oxygen arranged for the purpose. Where large rescuing parties are equipped with such apparatus, steel cylinders are often used for the reason that it enables a large reserve of oxygen to be

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held ready for instant use. The mouthpiece is then inserted between the lips and teeth, the nose clamp adjusted, and the apparatus is ready for use, as shown in fig. 5.

During the time a miner is at work, for example, breathing takes place simultaneously through two boxes. The third box is kept in reserve for the retreat. When the first two boxes have been exhausted, notice of which is given by the high resistance offered to breathing, and the miner is still in the locality filled with irrespirable gases, the third box can be switched into action by pressing a small handle attached to the apparatus. This third box is sufficient to maintain breathing for about half an hour. The apparatus may be recharged

FIG. 5.—Showing apparatus in use.

by removing the exhausted boxes and cleaning the upper and lower transverse tube, thoroughly removing any carbonate particles adhering thereto. The lower transverse tube should also be cleaned carefully in its interior, by means of a metal brush, after removing the screw cap. Then the tubes carrying the perforated crowns, which are merely fitted into the transverse tubes and may be readily removed, are cleaned by vigorously blowing through them, and finally the parts of the apparatus are put together and locked in position, whereupon it may be recharged in the manner already described and kept on hand for use.

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EXPLOSIONS IN WALES.

REGULAR RECURRENCE OF DEADLY EXPLOSIONS.

In connection with the foregoing invention to prevent disasters in mines from explosion of gas, the following report of Consul Williams, of Cardiff, on the loss of life in Welsh mines is pertinent:

The South Wales coal field supplies the famous smokeless coal for the navies of Europe, but it is, perhaps, better known to the world at large outside of the trade on account of its disastrous mine explosions, that recur regularly, and cause an appalling loss of human life. A record kept shows that more than 104 explosions have occurred in this district, entailing a loss of 4,104 lives. In 9 of the explosions, the number of killed exceeded 50, and 8 others snuffed out more than 100 lives each, in about that many seconds. This list, containing some of the blackest dates in the annals of industry, is produced here to show how enormous are the sacrifices demanded by these fiery coals:

Date.	Mine.	Killed.
1856—July 13	Cymmer	114
1860—December 1	Risca	145
1867—November 8	Ferndale	178
1880—July 15	Risca	119
1890—February 6	Llanerch	176
1892—August 26	Park Slip	110
1894—June 25	Cilfynydd	276
1905—July 11	Wattstown	119

It will be noticed that 3 of the explosions occurred in the month of July, and that 5 of them occurred in the summer season. An examination of the entire list shows that the distribution by months has been as follows:

January	13	July	8
February	11	August	11
March	12	September	9
April	3	October	8
May	6	November	8
June	8	December	10

CAUSES AND EFFECTS.

The greatest number of explosions occurred during the extremes of summer or winter, while April and October, the mid-spring and mid-autumn months, escaped with only 3 explosions each and a comparatively small loss of life. It is significant also that the severest losses of life have occurred in the driest months. These statistics indicate that mine managers should have practical knowledge of the workings of the barometer and the aquameter. Provision should be made also by Government weather bureaus for supplying daily reports for the guidance of the superintendents of mine ventilation and shot firing, and these should be posted on the shaft bulletin board for the education of the miners. The explosion that occurred at the United National Colliery at Wattstown July 11, 1905, cost the lives of 119 men and boys. The percentage of fatalities was possibly the highest on record,

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for only one man employed in the seam where the explosion occurred was rescued. He owes his life to his rare presence of mind, for when he heard the explosion he poured his tea on his jacket and stuffed it in his mouth to prevent suffocation by the after damp. He was unconscious when found, but the moistened gag had served its purpose, for he recovered quickly after being brought up. Of those killed, 55 were lads under 20 years, and 14 were only 14 years old or under. When found, many of them lay as if sleeping. The explosion occurred in the lowest seam worked, which is about 450 yards deep and 9 feet thick. The long-wall system of working is employed, the most modern lamps were in use, and the Schiel type of fans furnished 250,000 cubic feet of air per minute. The coroner's inquest ended August 2, the unanimous verdict of the jury being as follows:

"The explosion of gas was caused by shot firing in the barrier of coal between the sinking pit and the upcast pit."

The jury also agreed upon the following recommendations:

1. That shot firing should be absolutely prohibited except between shifts, and only shot men should be in the pit at the time.

2. That a thorough system of watering roadways, sides, and roof should be compulsory.

STATISTICS OF FATALITIES.

Notwithstanding these great tragedies, which shock the world, the number of mine fatalities in the United Kingdom is comparatively small. The entire number of persons employed in mining in Great Britain and Ireland during the year 1904 was 877,057, of whom 5,487 were females. The number of fatalities in the same time was 1,055, a decrease of 19 compared with 1903. The rate of fatalities per thousand among the underground workers has been as follows for the last three years: 1902, 1.37; 1903, 1.35; 1904, 1.34.

The rate per thousand among all those employed in mining has been lower, as indicated by the following comparison compiled by the British home office for the whole world for the year 1903:

United Kingdom	1.24	Holland	1.27
British Empire	1.46	Japan	1.71
Austria	1.60	Russia	2.53
Belgium	1.07	United States	3.26
France	1.09	All foreign countries	2.20
Germany	1.93	Average for the world	1.93

SAFEGUARDS RECOMMENDED.

The safeguarding of the lives of miners, whose industry has done much toward ameliorating the conditions of human existence and has made possible our manufacturing system and the conquests of commerce, is now engaging the attention of many experts. Following are a number of recommendations practically agreed upon:

Improved ventilation, especially at the face of the coal, sufficient to carry off all the gas from ordinary blowers.

Improved lamps to detect the presence of less than 1 per cent of gas.

Watering enough to prevent the accumulation of dust.

Shot firing between shifts, with only the trained shot men present.

Rigid inspection of the use of explosives.

Strict enforcement of all mining regulations.

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Introduction of cutting machines to reduce the number of men needed per mine.

Observations of the barometer and aquameter daily, and oftener if necessary, especially when shot firing is to be done.

The furnishing of a room near the shaft head supplied with all the latest appliances for first aid.

The training of a rescue corps at each shaft.

INTERNATIONAL UNION.

SATISFACTORY RESULTS FROM THE ASSOCIATION.

In trnsmitting the following report, Consul-General Guenther, of Frankfort, says that while the principle of an international trades union has been recognized in the programmes of socialistic labor unions of all countries, the principle has not thus far been put into practice, except in Germany. He writes:

At the St. Louis World's Fair the American labor organizations employed drastic measures, so the Germans say, to avoid the competition of German workingmen's organizations. The English trade unions, according to the German complaints, exact from foreign workingmen, as a rule, such high initiation fees as make it almost impossible for them to join. During the last German coal strike this principle of solidarity advocated by the German labor unions came to naught. After the strike had commenced, Mr. Bernstein, a member of the German Parliament, who, from his long sojourn in England, is well acquainted with the English labor organizations, visited Belgium and England in company with a member of the committee of the coal miners' association in order to confer with the Belgian and English unions. It was his intention, as stated by Mr. Hue, the editor of the Miners' Gazette, to ask the Belgians only for pecuniary assistance. The English, however, were to be asked for far-reaching measures to prevent an increased exportation of English coal to Germany during the strike, and in Mr. Bernstein's opinion the English association could have easily done so. Instead of pecuniary aid the Belgians organized a sympathy strike, which rendered no benefit to the German miners, and the English sent very liberal financial aid, but took no action to prevent increased exports of coal.

In order that the organizations of the several countries might be in constant touch with each other, without which effective action was impossible, the German miners' union sought for years past to establish an international miners' secretary's office. This effort failed, mainly on account of the opposition of English miners, and the German union became so dissatisfied in consequence that at the last general meeting a strong sentiment prevailed to take no part in future international congresses, if the motion for the establishment of a secretary's office should again be defeated. While a motion to that effect did finally prevail, hard words with reference to the English miners were spoken which nobody contradicted. For a number of other trades, as, for instance, the printers', the woodworkers', and the transportation trade, such international secretary offices are already in existence, some of which publish their own papers.

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AN INTERNATIONAL ARRANGEMENT.

The central trades unions of the principal countries have had some sort of an international arrangement since 1901. For the last two years a bureau has been in existence, the secretary of which is Mr. Legien, the chairman of the German general committee. This committee is the joint creation of the large "central unions," to which two-thirds of the organized German workmen belong. The other German workingmen's associations, especially the "Christian unions," have not joined. Of English unions, the general federation of trade unions is a member, but represents hardly one-fourth of the organized English workingmen. Aside from the two central unions named, twelve others have so far joined in this international secretary's office. For the near future this office will be of little practical use; its main effort will consist in publishing annual reports sent in by the several central unions, which the international secretary will compile, and accompany by general remarks. On the part of the German unions an effort is being made to arrive at some understanding, with the aid of this (the international secretary's) office, with reference to tactical questions, aid to strikers, the joining of foreign members, etc.

The first report issued by the international secretary, for the year 1903, has been published. In spite of the lateness of the publication three countries—Belgium, Italy, and Switzerland—did not report, so that the publication contains only reports from eleven countries, viz, England, France, Holland, Germany, Denmark, Sweden, Norway, Austria, Hungary, Servia, and Spain. According to the statistics of the reports, England had at the time when her report was made about 2,000,000 organized workingmen, of whom about 450,000 belonged to the general federation. Of the 1,280,000 organized German working men, about 900,000 belonged to the general committee (these two figures have been increased in 1904 to 1,470,000 and 1,000,000). With these 900,000 workingmen the German general committee represented about as many workingmen as all the other foreign central unions combined.

ENGLISH AND GERMAN UNIONS COMPARED.

A comparison between the English and German trades unions belonging to this secretary's office is interesting. While the number of English workingmen is hardly half of that of the German, the English total expenditure ($3,430,000) is a little larger than that of the Germans ($3,260,000). Of the total sum Germany paid nearly one-third ($1,070,000) for strikes, almost five times as much as England paid for the same purpose ($230,952). For assistance the English could therefore pay about three times as much as the Germans ($2,476,000 as against $881,000). For assistance to those out of work alone the English paid $1,000,000. The reason for these differences lies in the fact that the English trades unions avoid strikes by wage agreements more easily than the German unions.

The publication is very well satisfied with the Scandinavian trades unions, because, in the main, a uniform organization upon a central basis, with high fees of membership and a well-developed aid system, is established. Contrary to this France still has the autonomy of local unions. From this, the French report says, it can be seen that the French hold to their independence. They, above all, fear discipline,

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and high membership fees are fought most bitterly. To this the general committee cooly remarks that it can not enthuse over this lack of discipline nor over the disinclination to pay higher fees, but, on the contrary, perceives in both the cause of the weakness of the French trades unions.

RESULTS OF EXPERIENCE.

In this respect the German trades unions have gained experience. Yet in the nineties the localists—groups of workingmen without discipline, which wanted to make the trades unions a part of the social-democratic party, and asserted the full independence of each local organization of workingmen—caused much trouble for the central organizations. As distinct organizations these "local trades unions" play now-a-days only an unimportant part. Local tendencies are, however, still found in the central organizations, but in all the tendency is for a stronger centralization and discipline. Upon this rests the power of the central unions; they desire that the foreign trades unions should profit by their example, all the more as the ever growing associations of employers caution them to strengthen their position still more.

A development of foreign trades unions, according to the German example, and an international agreement between them to work hand in hand, is the dream of German trade-unionists.

PROFIT SHARING.

ACTION OF BRITISH LANDOWNERS.

Consul Liefeld, of Freiburg, Germany, transmits the following extract from a recent issue of the London Daily Mail dealing with efforts to check the depopulation of English villages:

With a view to placing a check upon the depopulation of Kentish villages, which is reaching alarming proportions, several large landowners have decided on a system of profit sharing with their agricultural laborers, hoping by this means to stimulate "Hodge" to take a greater interest in his employment. The system of sharing farm profits was initiated by Mr. E. W. Hussey, a large estate owner, of Scotney Castle. Every year the hands are called together, and each receives a share of the profits made on the year's working of the farms. On the last occasion of the profit sharing each man received $13.13, while a youth's share amounted to $8.75. In cases where several members of a family are engaged on a farm, sums approaching $48.66 have been taken home. The system has had such successful results that Mr. Hussey has received numerous inquiries asking for details as to the working of the scheme, with the consequence that other farmers in the county have expressed their intention of working on similar lines. All the employees on Mr. Hussey's Lamberhurst estate now take such a keen interest in their work that they exhibit no inclination whatever to migrate to the towns. Lamberhurst, though a very small place, has long been looked upon as a model village, everything being done to encourage the inhabitants to remain within its boundaries. The wealthy residents in the neighborhood have established a number of up-to-date recreative institutions, and the village is unaffected by the problem of the unemployed.

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GERMAN ENTERPRISE.

MACHINE SHOP ESTABLISHED IN RUSSIA.

Consul Ernest L. Harris, of Chemnitz, Germany, furnishes a report on the successful enterprise of a Chemnitz company in establishing a machine shop in Russia. He says:

In 1896 the Saxon Machine Factory, a joint stock company, formerly belonging to Richard Hartmann, of this city, founded a branch establishment at Lugansk, in Russia. For many years it had been the policy of Russian statesmen to protect their own home industries by increasing from time to time the tariff on foreign-made machines. The result of this action was soon apparent. French and Belgian manufacturers established branch machine factories in different parts of Russia, and the Saxon Machine Factory of Chemnitz, in order to keep a grip upon the markets already won at an expense of years of patience and effort, also followed suit and built a large factory at the above-named place.

The total area of the ground on which the factory stands amounts to 148 acres. The enterprise has been prosperous from the beginning. From 1897 to 1905, more than 700 locomotives have been made and delivered to the Russian railways. The war in the Far East is straining the factory to its utmost capacity. At the outbreak of the war the company made a contract with the Russian Government to deliver 102 locomotives within six months time. During the present year the average output has been increased to 20 locomotives a month. In 1897 the factory was opened up with 1,500 laborers. Since then that number has been increased to 4,000. There are few foreigners engaged in the factory, for the reason that it must be, and actually is for all practical purposes, entirely Russian in character. The value of the entire plant to-day is estimated at $5,000,000.

DYERS' STRIKE.

TERMINATION OF THE TROUBLE.

Consul Ernest L. Harris further reports that the dyers' strike in Saxony, which had its origin in Glauchau-Meerane, and which threatened at one time to assume enormous dimensions, has come to a sudden end. He writes:

The great strike at Crimmitschau during the winter of 1903–4 is still keenly remembered by everybody in this part of Saxony. At that time 8,000 skilled and organized workmen held out for six months. The factory owners finally won the day, but the industries of Crimmitschau suffered to such an extent that they will not regain their former prosperity for many years to come. After the strike was over the factories were only able to take back a small percentage of their old workmen for the reason that all outstanding orders had been canceled, and in the meantime a sharp competition sprung up in other parts of Germany.

In the present crisis there is no question but what both employer and employee throughout all the textile centers in Saxony and Thur-

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ingia were anxious to localize and settle the points of difference before the strike spread from Glauchau-Meerane to Gera and other places in Thuringia. The number of workmen on strike in Glauchau-Meerane was 11,000, and if it had assumed greater dimensions fully 40,000 men would have been forced to quit work. The reason for this is to be found in the action of the Gera manufacturers who, by previous arrangement, had agreed to work in union with the factory owners of Glauchau-Meerane. By closing down their factories the pressure of their united efforts would be brought to bear, not only upon the strikers at Glauchau-Meerane, but upon organized labor in general.

On August 12 the dyers and their employers in Glauchau-Meerane, each making certain concessions, finally agreed upon a scale of wages and declared the strike off, the same having lasted about three weeks. The minimum weekly wages agreed upon is $3.50 for men and $2.15 for women.

INSURANCE AGAINST NONEMPLOYMENT.

The Frankfurter Zeitung recently published a dispatch from Berne, Switzerland, which reads as follows:

"With reference to the beneficent effects of the insurance association against nonemployment of working people, existing in the city of Berne, the following interesting data are furnished:

"The association has at present 593 members, of whom 25 are foreigners; 431 are married. During the last winter 305 members reported to be out of employment; they received as day money, in all, 11,069 francs. With few exceptions these workingmen belonged to the building trade. From 1893 to 1905 the association received in insurance premiums 31,208.20 francs, the municipality contributed 111,200 francs, and in presents and contributions from the employers 30,087.70 francs. The amount paid to those out of work during that period was 150,285.45 francs. The association has a large room in which the members find books and periodicals."

COST OF LIVING.

VARIANCE OF OPINION IN FRANCE.

The Economiste Français, of Paris, says that the cost of living abroad, especially in France, is a subject upon which wide variance of opinion exists. There is no doubt that the English, on the average, have one-third more to spend than the French, and, all things being equal, more money is earned in England than in France. Further, the cost of life in England is far less than it is in France. The contrary was true in former days, but now the high tariff in France and free trade in England have produced their results.

Butter in France costs 30 to 60 cents per pound, Swiss cheese 25 to 30 cents per pound, and fowls 30 to 50 cents each. Milk is 10 cents per quart, bread 4 cents per pound, and meat 30 to 50 cents per pound. Fruits, which are grown abundantly in France, cost twice as much as they do in England; bananas and oranges, which Algiers exports by millions, cost 4 cents each. Coffee is 50 to 60 cents per pound, tea as much as $1.40 to $1.80 per pound, and sugar 10 to 12 cents per pound. Coal in Paris is worth $14 per ton, and in many

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houses heat is a great rarity. In London two boxes of matches are given for 1 cent, but in France each box costs 2 cents and the matches are bad. Drugs are almost prohibitively expensive.

SUGGESTIVE BALANCE SHEET.

M. de Foville presents the balance sheet of four average families. The first family, with an income of $2,000 per year, represents a Parisian household—father, mother, two children attending school, and a servant. The second family, with an income of $1,600, represents a provincial household, consisting of a father, mother, two children, and servant. The third family, with an income of $800, is a Parisian household, consisting of father, mother, a small child, and no servant; and the last is that of a workman's family at Rheims, consisting of father, mother, two children, 5 and 10 years of age, the family disposing of a purse of $415 per year. The first family expends $1,744 of its income for actual living expenses, and has a balance of $256 for pleasures, doctors, and so forth; the second family expends $1,250, and has $350 left; the third $667, and has a balance of $133, and the fourth $320, with a balance of $95. In the case of the third family the food consists of coffee, bread, and butter for breakfast; at midday meat, vegetables, and dessert; at 4 o'clock the mother and child have chocolate and bread, and at 6 o'clock there is a dinner of soup, vegetables, and dessert.

M. de Foville says that it "lies in the innate inclination, one might say the passion, for economy. With a few francs the little Parisian, who may be hungry many days during the year, is able to make herself a hat and frock which many wealthy women might well envy. And it is with the table as it is with the toilet. The art of utilizing the remnants is an art essentially French, whether the subject be ribbons or ragouts. The spirit of economy is as common in our country as it is rare in England. Fathers and mothers in France consider themselves the debtors of their children, and even the bachelors think they should leave something behind."

HIGH PRICES IN GERMANY.

In a long, detailed report on the cost of living in Germany, Consul Harris, writing from Chemnitz, says that foods are comparatively dearer in the Empire than in the United States. For example, coffees range in prices from 24 to 48 cents per half kilo, or 1.1 pounds; tea runs from 48 to 95 cents; sugar, granulated, from 0.078 to 0.085 cent; rice and barley from 4 to 8½ cents; butter from 32 to 33 cents; oleomargarine, much of which is manufactured, from 17 to 21 cents; milk is a trifle less than 5 cents a quart; fresh meats sell for about 19 cents a pound; bacon, 21 cents; ham, 29 cents; turkeys, 24 to 28½ cents per 1.1 pounds; potatoes from 95 cents to $1.07 per 112 pounds.

It is hardly necessary to say that no very substantial part of the Empire's working people pay any such prices, for their wages do not permit of such. The food of the masses, made up in large part of fish, herring, cheap meats, potatoes, and the cheaper forms of vegetables, are high enough to hinder anything like luxurious living. Herrings sell for 0.023 cent each; salmon for 48 cents to $1.19 per

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1.1 pounds. The foregoing items and figures have been picked from Mr. Harris's report for the purpose of pointing out the most suggestive and significant features of the whole.

MEATS FOR THE POORER CLASSES.

In regard to meats, Mr. Harris says: The question of cheap meat for the poorer classes is beginning to agitate the Empire. As was to have been expected, the tariff laws enacted in favor of the landed proprietors have not produced the desired effect. Germany produces about 75 per cent of her own food stuffs. It was claimed that the remaining 25 per cent could also be produced by a better system of intensive farming, if somewhat facilitated by a tariff which would protect the home meat and grain markets. Germany's population is 60,164,000, an increase of 800,000 in a year.

In this connection, a leading Chemnitz paper publishes pages from a workingman's daily food expense book. The yearly outlay for rye bread was $44.88; white bread, $20.34; meat, $9.90; sausage, $7.64; bacon, $10.85; butter, $21.27; eggs, $4.10; milk, $18.84. The family consisted of father, mother, and several children (unfortunately, the exact number and age of the members of the family is not given).

In this connection Consul Harris calls attention to the fact that the importations of all kinds of meats from the United States fell off from 47,243 tons in 1898, worth $9,448,600, to 4,342 tons, worth $889,882, in 1904. This is due to the severe laws regarding meat inspection. Other countries, however, are affected, notably Denmark, Holland, Russia, and Austria-Hungary.

WAGES IN GERMAN COTTON MILLS.

Consul-General Guenther, of Frankfort, writes:

The great strike of cotton mill operatives of Saxony and Thuringia, which lasted four weeks, and which was participated in by over 40,000 workers, has been settled by compromise. According to the terms of the agreement the working day in the factories is to be 10½ hours. The minimum day wage scale paid is as follows: Male operatives up to 18 years of age, 55 cents; female operatives, 34½ cents. Those that have not been employed in the factories for six months receive 10 per cent less than these rates. Overtime will be paid for at the rate of 7½ to 9½ cents per hour.

COMBINE OF SCREW MAKERS.

Consul Halstead, of Birmingham, England, writes that the competition between German and English screw makers having become excessively keen, a price arrangement has been effected, according to the Birmingham Daily Mail, which states it has been arranged that on and after October 1 no British orders for screws shall be executed by German firms, the British firms similarly undertaking not to execute German orders. The international convention also includes, the Mail understands, French, Swiss, and Italian workers, but that the Belgians, who are not large producers, have refused to join, and "already screws have been advanced about 50 per cent in price, and other advances are probable."

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SOUTH AMERICA.

BRAZIL.

SHIPPING AND TRADE FACILITIES.

FREIGHT RATES FROM THE UNITED STATES AND EUROPE—COAST STEAMERS IMPORTANT AUXILIARY.

Special Agent Lincoln Hutchinson continued in September his valuable and informative letters on trade conditions in Brazil. From São Paulo, under date of July 29, he furnished a report regarding the influence of shipping facilities on trade between the United States and Brazil, the information contained in this letter being supplemental to that contained in previous letters on the same general subject. Mr. Hutchinson declares that further inquiry touching the influence of shipping facilities on trade with South America serves in some respects to strengthen opinions expressed in former letters published in consular and trade reports, while in others it necessitates certain modifications, particularly as to rates of freight paid by European and American exporters on merchandise sent to Brazil. Mr. Hutchinson's letter follows:

All the evidence I can get tends to confirm the statement which I made tentatively in former letters, that freights from Europe and from the United States are, in the main, just about equal. All but the "tramp" steamers belong to lines which are in the "conference," and the rates from New York, London, Southampton, and Hamburg do not differ materially. There is, however, a system of "reduced rates" on certain classes of commodities shipped in large quantities which may, and probably does, at times, operate so as to give a slight advantage to European shippers. These reduced rates are as follows (I quote from the tariff issued by the shipping conference):

Two shillings sixpence less per ton on the following articles for quantities not less than 100 freight tons by one steamer and on one bill of lading: Bottles, empty, and paper in bales and reels.

Two shillings sixpence less per ton for quantities not less than 200 freight tons by one steamer and on one bill of lading, on rice.

Two shillings sixpence less per ton on the following articles for quantities over 100 freight tons and up to 200 tons by one steamer and on one bill of lading: Bricks (loose), bridgework, earthenware, drainpipes, girders, glassware (hollow), pig iron, machinery, paving and flagstones, rails, and fastenings like bolts, nuts, fish plates, switches, and crossings, railway cable, railway iron chairs, railway material (portable), telegraph material, timber, wood shavings, empty boxes for matches, undipped sticks for matches.

Two shillings sixpence less per ton on the following articles for quantities over 200 freight tons and up to 400 tons by one steamer

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and on one bill of lading: Cement, coin (nickel and bronze), iron pipes and tubes, manure, military equipments, phosphate of lime, and superphosphates.

THE POOLING SYSTEM.

As Europe is the largest shipper to Brazil of most of these articles, and as the system of "pooling" shipments by combining many small orders in the hands of an export commission house is more in vogue in Europe than in the United States, it is probable that a larger share of Europe's exports get the benefit of these reduced rates than is the case with American exports. In the great majority of cases, however, in which Europe may get this advantage the reduction of 2s. 6d. is so small a percentage of the total cost of the goods that the practical results of the reduction must be almost a negligible quantity. But there is another method by which certain of our competitors are gaining an advantage which is having more serious consequences, namely, by granting reductions on local coasting freights here to ports not reached directly by the trans-Atlantic steamers. The coasting trade of Brazil, as is well known, is confined to vessels flying the national flag, and owned and controlled by companies at least 50 per cent of whose directors are Brazilians. For many years the bulk of this coasting trade has been in the hands of one large Brazilian company, though there are other smaller ones also. The service has been poor and the freights exorbitant. The freight, for example, from Rio de Janeiro to Rio Grande do Sul is said to be about equal to that from New York to Rio. Besides this the delays in transshipment from the trans-Atlantic steamer to the coasting boats, whose time-tables are arranged in disregard of close connections, have been excessive.

TO OVERCOME LOCAL DISCRIMINATIONS.

Some time ago, however, a group of German steamship men and exporters determined to remedy the evil, so far as their interests were concerned, by putting on a local line of their own to run from Rio to the small ports of the south not reached by the trans-Atlantic boats. This line, known as the "Cruzeiro do Sul," was, of course, established in conformity with Brazilian law, and is legally a Brazilian line, but the real control is in the hands of the Germans. By making through rates on German goods from Hamburg or Bremen to the southern ports of Brazil, such as Paranagua or Rio Grande do Sul (by agreement with the "Cruzeiro do Sul"), the trans-Atlantic German steamers are able to deliver the goods for a sum which is less than the "conference" trans-Atlantic rate plus the ordinary local rate. Thus, without any apparent violation of the "conference," German goods are delivered to the ports mentioned at rates less than those which other goods are forced to bear. It is probable that a large part of the recent increase of Germany's export trade to Brazil may be attributed to this one cause. Within the last two days there has appeared the confirmation of a rumor which has been in the air for weeks, which seems to indicate that American traders are about to follow the example set them by the Germans. It is said that a company partly, at least, financed by Americans, has purchased the large Brazilian coasting line mentioned above, the "Lloyd Brasileiro," and will operate it in connection with a line running to New York.

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CLOSER RELATIONS INVITED.

I have found Sao Paulo of far greater importance than I imagined. The city and the State, so far as I have seen them, are a revelation of what may be done in Brazil through energy and modern methods. I shall have much more to say in regard to it at a later time. For the present I must content myself with reporting on two points of considerable interest and importance which have just been brought to my notice. This afternoon I had a long interview with the state minister of agriculture, commerce, and public works. He displayed intense interest in the possibility of developing closer commercial and financial relations between Brazil and the United States, and spoke with great earnestness of the hope which he and his colleagues entertain that American methods and machinery may be introduced into the agricultural industries of the country, and American capital enlisted to develop the vast natural resources and the latent manufacturing possibilities. On two points he made definite announcements which it might be well to get before interested parties in the United States as soon as possible.

First. The State of Sao Paulo will publish shortly an offer of prizes of considerable amount for satisfactory machinery to be used in connection with the cultivation, picking, and winnowing of coffee. Successful competitors are not only to receive the prize, but will also be given a monopoly of the sale of the machines for a considerable time. The Government indorsement of the inventions, combined with the selling monopoly in a State which produces 40 per cent of the coffee crop of the world, ought to be well worth competing for.

AMERICAN CAPITAL DESIRED.

The other offer is in connection with the State's desire to interest American capital in the development of the natural resources of the country. The State has an area of some 116,000 square miles, is mainly a plateau whose average elevation is about 2,500 feet, has a delightful subtropical climate, and can produce—besides coffee—sugar, cotton, tobacco, maize, and other subtropical products. It has vast forests of the finest hardwoods, and there are many indications of mineral wealth, but these resources, except coffee, have as yet been hardly touched—in fact fully two-thirds of the area of the State is virtually unexplored. What the minister proposes is an exploration party composed of a few experts, such as a mineralogist, a botanist or agriculturist, a specialist in hardwood lumber, a zoologist, etc., to examina into these resources, with a view to interesting capital in their development. Discovery would be followed by valuable concessions. Such a commission would be the guests of the State from the time of their arrival at Santos, and the only expenses would therefore be the passage from New York and return, and the payment of the members for their services. Details could be arranged by direct application through properly accredited parties, to the minister, Dr. Carlos Botelho. Doctor Botelho seemed deeply in earnest in making the proposal, and I shall make a point of seeing him again before I leave São Paulo in regard to it. I can give only these bare outlines at present, as it is necessary to close my letter to catch the mail which leaves Santos to-morrow.

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MOVE FOR DIRECT STEAMERS FOR BRAZIL.

The Rio de Janeiro Journal of Commerce of July 27 announces that American capitalists are about to purchase a Brazilian line of coasting steamships, with the intention of establishing a line between New York and Para. The Journal says:

It has been definitely decided that the stock of the "Novo Lloyd Brazileiro" is to be sold to a group of capitalists, represented by Senhor Manoel Buarque de Macedo. The selling price is 9.500:000$000 (at present exchange this equals $3,200,000). The new company agrees to give orders for the construction of eight vessels for its north and south coast lines.

We believe that American capital will take part in the combination, and it is certain that there will be established a direct line between New York and Para which will enter into mutual arrangements with the steamers which carry on the coasting trade. It is said that this line will receive a subvention from the American Government.

It is said, also, that the contract (with the Brazilian Government) contains the future obligation to put on two mail steamers to Europe when the condition of the company will permit.

VARIED RESOURCES.

AGRICULTURAL AND INDUSTRIAL DEVELOPMENT—LOCAL INDUSTRIES AND PROTECTIVE TARIFF.

No. VIII.

Special Agent Hutchinson's letter from Desterro, Brazil, is a very comprehensive report on existing conditions in that country. He explains the influence of the foreign population, and declares that it is largely to the presence of this element and the investment of foreign capital in local industries that give their respective countries status in the foreign trade of Brazil. Those portions of Mr. Hutchinson's letter, however, which will attract greatest attention relate to the disposition on the part of the people and Government of Brazil to establish local industries that will supply their wants, and to that extent displace foreign imports. In this connection it is significant that the imports of a number of manufactured goods have been steadily declining for the past ten years. The facts and figures which Mr. Hutchinson presents demonstrate that this falling off in the importation of manufactured goods is not due to decreased purchasing power of the Brazilian people, but to the steady advance they are making in the establishment of industries to supply their own wants. It is pointed out that the building up of local industries will not necessarily be detrimental to interests of American manufacturers and exporters, provided they recognize existing conditions and direct their efforts to supplying the markets of Brazil with the materials, machinery, etc., that will be needed in the upbuilding of local industries. It is further pointed out

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that this upbuilding must necessarily be from the bottom; that the first steps in production will be largely confined to coarser and cheaper grades, while those of better quality will continue for some time to come from foreign countries. Mr. Hutchinson's letter, dated at Desterro, Florianopolis, August 11, follows:

Since my last report, which was dated at São Paulo July 29, I have made a somewhat extended trip through the coffee district of São Paulo, have spent several days in the only port of the State of Santos, and have come south to this point, stopping en route at the ports of Paranaguá and Antonina, in the State of Paraná, and São Francisco, in the State of Santa Catherina. As I have come southward I have been more and more deeply impressed with the possibilities of development in which this country abounds. In the extreme north, Pernambuco, etc., the tropical climate is a serious though, I believe, not insurmountable obstacle to great economic activity, the lack of incentive having made the native people indolent and unprogressive. Here in the south, however, conditions are very different. The climate is subtropical on the coast (Desterro lies in 28 degrees south latitude), and even temperate on the plateau which forms the principal portion of the States of São Paulo and Paraná and a considerable part of the States of Santa Catherina and Rio Grande do Sul. The soil is remarkably fertile; the rainfall is heavy, but the land is so well drained that there are scarcely any swamps; there is abundant water power for manufacturing industries, and the population, which is largely composed of foreign immigrants, is industrious and enterprising. In the State of São Paulo at least one-third of the population is Italian, while in the capital city, São Paulo, one-half belong to this nationality. Here, in the State of Santa Catherina, probably an equal proportion are Germans or of German extraction. The presence of these foreigners, and of the very numerous Portuguese immigrants, means much for the future of the country. The population as yet is very sparse, and the coming in of an industrious element from abroad is responding to the crying need for labor to develop the agricultural and industrial enterprises which the resources of the land make possible. The influence upon the native working population likewise is good, and I have seen evidences that the competition of the foreigners not only stimulates them to greater activity, but is a valuable object lesson to them as to methods of work, etc.

NUMBER AND INFLUENCE OF FOREIGNERS.

It is impossible to obtain accurate figures as to the total numbers of foreigners of various nationalities in Brazil, as the Government collects no satisfactory data on the subject, but the most reliable estimates, made by the consuls of the respective countries, are as follows: Italians, 1,250,000, of whom more than one-half—650,000—are in the State of São Paulo, 125,000 in the State of Rio de Janeiro, 100,000 in Rio Grande do Sul, and 60,000 in Minas; Portuguese, 1,000,000, mainly in Rio de Janeiro and neighboring States, though they are more widely scattered throughout Brazil than other foreigners; Germans, 250,000, chiefly in the States of Rio Grande do Sul, Santa Catherina, and Paraná, though the numbers in Rio de Janeiro are also assuming considerable proportions; English, 4,000, and all others,

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including French, Spanish, Turkish, Russian, and a handful of Americans, 20,000.

These foreigners exercise a profound influence in determining the sources of supply of many imported articles. But they do this in very different ways, for the various nationalities belong to quite different classes of the population. The Portuguese and Italians, with some important exceptions, belong to the laboring class on the plantations and in the factories, while the Germans, and even more the English, are merchants, traders, owners, and managers of large enterprises. The Portuguese and Italian laborers have little knowledge of food stuffs, clothing, or other articles of consumption, except those to which they have been accustomed at home. They bring their tastes and prejudices with them to the new land and create a demand for products of their home countries which can only be supplied through direct importation. This is particularly well illustrated in the case of the Italians. They live here mainly in "colonies" on the large coffee fazendas, with little contact with the scattered population surrounding them, and their home habits are especially persistent. This one fact probably goes a long way toward explaining the recent rapid growth of Italian export trade to Brazil.

The English and the Germans are more cosmopolitan as regards food, clothing, etc., but the influence of their presence on the character of the import trade is none the less potent. In previous letters I have already alluded to the tendency of these foreign managers and owners of Brazilian enterprises to purchase their supplies, machinery, etc., in their home countries. The more I see of the country the more firmly convinced I become that one of the causes of American backwardness here lies in the fact that our industrial and financial interests are so small. Only in the Amazon region have Americans made any considerable investments. In the south a beginning only has been made, and that recently.

AMERICAN CAPITAL AND ENTERPRISE.

In this last sentence I refer to the enterprise known as "The Light and Power Company." This concern, whose head office is in Toronto, is backed by American and Canadian capital. About five years ago it began its Brazilian operations in São Paulo, where was organized "The São Paulo Tramways, Light, and Power Company." From $8,000,000 to $10,000,000 was invested in developing hydro-electric power at a point some 25 miles from São Paulo, with transmission lines to the city. The investors have been eminently successful, having not only made good dividends for themselves, but having as well given to São Paulo a street-car and lighting service as good as any in the world and cheap power for many of the local industries. These same people have now gone into Rio de Janeiro with an exactly similar enterprise, which will make a capital investment of $10,000,000 to $15,000,000. Their water power is to be obtained from a branch of the Parahyba River, about 50 miles from the city. They have purchased most of the old street-car lines, which will be electrified, have projected new lines, have bought out the gas company, and will within a few years be performing for Rio de Janeiro the same important services which they have already rendered for São Paulo.

The success of this concern is but a single indication of what American capital may do in Brazil. There are innumerable openings for

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enterprise if our capitalists will but take the trouble to look into them. But unfortunately Brazil has a somewhat unsavory reputation among our people, which may or may not be wholly undeserved. In the vicissitudes which the young Republic has been obliged to pass through in the past fifteen years the necessity for revenue has led to some acts toward foreign investors which were shortsighted and distinctly harmful not only to the foreigners, but to Brazil itself. There is, however, abundant evidence now of a settled policy in favor of foreign investments, a more intelligent recognition of the country's need of capital, and a willingness to guarantee fair treatment to those who can be induced to turn their attention in this direction.

DISPOSITION TO DEVELOP HOME INDUSTRIES.

The opportunities are abundant. Harbor and dock works, city improvements, paving, road making, development of electric power and lighting, telegraph and telephone service, street railways, railroads, and many similar enterprises are beginning to be a prominent feature in the development of the new Brazil. The agricultural industries are crying for improvement and factories need to be built. The leaders of thought and politics in the country are frankly and consistently protectionists. There are many things now imported from abroad which could easily and cheaply be made at home, and the people quote freely the example of the United States in favor of their determination to develop their production. There can be no question that the very high tariff duties which American and European producers complain of as an obstacle to their export trade to Brazil will continue in force or be increased, so far as they apply to goods which there is any reasonable possibility of producing in Brazil itself. These high protective duties may, however, be turned to the advantage of our people, instead of remaining a hindrance to development, if our capitalists will take shelter behind this very tariff wall, introduce American methods and machinery, and make the goods for Brazilian consumption here in Brazil itself.

BRAZIL'S ECONOMIC FUTURE.

The economic future of Brazil, so far as concerns the production of goods for home consumption, will depend upon two main lines of development—in agriculture, the growing of food stuffs and raw materials; in industry, the manufacture of those articles for which there is a home production of raw materials. The chief food stuffs of the mass of the people are mandioca, beans, rice, maize, wheat flour, jerked beef, pork products, fruits, sugar, potatoes, onions, etc. Some of these are already, and most of them could be, produced in the country. The climate, except on the plateaus of the south, is too warm for the successful production of wheat in competition with the temperate zones, and the same seems to be true of potatoes; but mandioca, beans, rice, maize, tropical fruits in the north, and nearly all the temperate-climate fruits in the south, and sugar grow readily, while cattle and pigs, as fine as any in the world, can be raised almost anywhere south of Rio de Janeiro. Yet all of these food stuffs except sugar and mandioca are imported in large quantities. It is inevitable that such a condition of affairs should change and there is abundant evidence that the transition is already under way. The importation of food stuffs, which for

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the five years from 1894 to 1898 averaged $17,773,000 per annum, fell in the five years 1899 to 1903 to $13,365,000 per annum, a decline of nearly 25 per cent. The obvious thing for foreigners to do who are interested in these lines of activity is to stop trying to "send coals to Newcastle" and to come in with improved machinery and processes and produce the goods on the spot.

The same is true, as already intimated, of those manufacturing industries for which the country produces the raw materials. The coarser and cheaper grades of cotton goods, boots and shoes, and leather goods generally, furniture, carts and wagons, glass, candles, soap, matches, beef and pork products, canned and preserved fruits, and many other homemade articles are already engaging much attention in some quarters, and these protected native industries, even with inferior methods and out-of-date machinery, are cutting severely into the import trade.

SIGNIFICANT FIGURES.

The following figures are most significant. They show the average exports per annum to Brazil from the United States and the leading European countries for two five-year periods, 1894–1898 and 1899–1903, for several important lines of manufactured goods.

Goods.	1894–1898.	1899–1903.
Cotton manufactures	$17,945,000	$12,117,000
Leather manufactures	2,375,000	1,760,000
Paper and manufactures	1,740,000	1,483,000
Glass and glassware	859,000	585,000
Wood manufactures	770,000	505,000
Woolen manufactures	4,498,000	2,285,000
Food stuffs	17,773,000	13,635,000

Many other figures of the same sort might be given, but these are sufficient to indicate the decline which is going on. It is sometimes said that the decline in imports is due to the decreased purchasing power of the Brazilian people, and this may be a partial explanation in regard to some classes of goods. In the main, however, the true cause is to be found in the increase of home production, and the process is likely to continue, except as regards the finer and higher priced grades of goods. I have visited many factories, from Pernambuco to São Paulo, and have been deeply impressed with what is being done. And these personal impressions are confirmed by such statistics of production as are available. The Federal Government has not yet undertaken the compilation of industrial statistics on any satisfactory scale, but one or two of the States have done so, the most complete figures being those of São Paulo. These latter are significant of what the industrial future of Brazil may be, and I beg to call attention to some of them.

PROGRESS IN INDUSTRIAL ENTERPRISES.

There are in the State of São Paulo several hundred factories in all, some of them, it is true, very small, but a good many of them of considerable size. They produce cotton and other textiles, boots and shoes and other leather goods, brick, tiles and earthenware pipes and goods, glass and bottles, beer, hats and ready-made clothing, flour, tinned and preserved meats, canned and preserved fruits, matches,

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furniture and cabinet ware, tinware, vegetable oils, and other articles of less importance. Some of these factories supply only a greater or less proportion of the local consumption, but others have a surplus for export to other parts of Brazil, and their business is growing. For example, in the year 1904 São Paulo exported to other parts of Brazil the following articles, manufactured within the State, besides smaller quantities of many other goods:

Alcohol	$38,000	Hats	$129,000
Boots and shoes	112,000	Ironware	28,000
Beer	128,000	Matches	53,000
Cotton manufactures	1,160,000	Paper	26,000
Earthenware pipes	33,000	Sole leather	102,000
Furniture	12,000		

These figures in themselves may not be very significant, but when we compare them with the total foreign purchases of Brazil of the articles mentioned their influence on the import trade becomes apparent. Brazil's total imports of boots and shoes from foreign countries in 1903 were $231,000. The surplus which the single State of São Paulo was able to sell to her neighbors ($112,000) was nearly half as much as they purchased abroad. Of beer the total imports were $186,000, and the amount supplied by São Paulo was over two-thirds as much. For hats the sales by São Paulo amounted to 45 per cent of the purchases from abroad; for earthenware pipes, 77 per cent; for furniture, 10 per cent; for cotton goods, 7½ per cent, and for sole leather, 3½ per cent. São Paulo is an exceptional State in many respects, for the spirit of progress has made itself felt there first; but what she has done others may do and are doing to some extent. The time is likely to come when the imports of some of the good sin the above list will virtually cease. In Rio de Janeiro there are already extensive mills of the same sort as those in São Paulo. In the south, in Santa Catherina and Rio Grande do Sul, German capital is bringing forth a like development, while even in the unprogressive north, in Bahia and Pernambuco, a few important factories for the making of cotton goods, matches, soap, etc., exist and are reported to be prospering.

INDUSTRIES THAT MAY BE DEVELOPED.

It is often said that Brazil can never become a great manufacturing country, because of lack of fuel, and must therefore continue to depend on Europe and the United States for manufactured goods. This is true of certain great industries in which abundance of cheap fuel is a sine qua non, such as the production of iron and steel, machinery, etc.; but the industries above mentioned do not necessarily depend upon coal fuel, and some of them need no fuel at all if they can get power from other sources. Brazil has an enormous amount of hard-wood fuel, and is supplied as few countries are with water power which is being made available by electric transmission. The entire eastern tier of States along the coast, which my visit has covered, consist of a narrow belt of low coastal plain backed by a mountainous plateau ranging in elevation from 2,000 to 7,000 feet. Rainfall throughout nearly all of this section is abundant, rivers are numerous and swift, with a steady flow of water and many falls, and the distances necessary for transmission to possible industrial centers are generally small. There is no reason why the same sort of development should not take place here, as is now being witnessed in northern Italy.

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For the sake of illustration, it may be well to mention more in detail some of the lines of industry in which development seems possible. The following list is by no means complete or exhaustive. A technical expert could undoubtedly discover many things to add to it.

SUGAR.

1. In my first report from Pernambuco I mentioned the backwardness of the sugar industry of that State. Both in the raising of the cane and in the manufacture of the sugar there is little attempt made to use up-to-date processes and machinery. This is true of the industry in the entire tier of coast States from north to south. They have every natural advantage for the production of sugar, yet they all are lacking in modern methods. In the case of Pernambuco this is partly explained by the difficulty of finding a market for the output, for the State already produces far more than enough for local consumption. But the States farther south are in a very different position. São Paulo, for example, consumes about 71,000 tons of sugar per annum, of which the producers of the State supply only 23,000 tons. The balance is imported, mostly from Pernambuco, in spite of the excessively high coasting freights, the dock charges at Santos, and the heavy railway freights from Santos to the populated plateau of the State, charges which aggregate about 40 shillings per ton. The authorities of the State are now endeavoring to interest capitalists in the building of mills within the State to utilize the cane, which grows readily, abundantly, and of excellent quality.

CULTIVATION OF COTTON.

2. Cotton, like sugar, grows readily in all the coast States, and furnishes the raw material for the domestic cotton mills, yet there is little or no attempt to introduce modern methods of cultivation. This is another fact to which I alluded in my first report. The quality of the fiber under present conditions is poor, but there is every reason to believe that improved methods of cultivation would produce superior material. Cotton manufacturing, of the coarser and cheaper grades of goods, is a growing industry with a promising future, and the production of the raw material near the factories would be a profitable enterprise. At present nearly all the mills are concentrated in the States of São Paulo and Rio de Janeiro, yet their raw material comes almost wholly from Pernambuco (some from Bahia also) and, like sugar, has to bear the high coast freights, the costs of handling and dock charges at the ports, and the heavy railway freights before reaching the factory door. São Paulo at one time produced considerable cotton of good quality, but the industry was allowed to decline after the emancipation of the slaves and the general rush into coffee raising. Conditions have now changed again. Coffee has been overproduced and has become less profitable; the development of the local cotton mills opens a ready market for the fiber which formerly had to be exported to England and Europe, and public attention is being turned toward the possibility of reopening the cotton fields. There are at present in the State no less than 18 cotton mills, with some 3,500 looms and 55,000 spindles, producing 40,000,000 yards of textile goods per annum (besides other articles, such as twine), and consuming each year nearly 7,000 tons of raw cotton. Some of this the State itself

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produces, but probably 2,000 tons are imported from Pernambuco and other northern States. For Rio de Janeiro there are no statistics as to the exact number and size of the cotton mills, but from personal observations, confirmed by interviews with men familiar with the business, I should say that they are about equally important with those of São Paulo. Like those of São Paulo, they show every sign of prosperity—new ones are being built and old ones enlarged.

PRODUCTION AND CONSUMPTION OF FOOD STUFFS.

3. Maize also can be grown in abundance throughout the entire coast region of Brazil. Little seems to be done, however, toward its systematic cultivation, and the domestic crop is insufficient to meet the demand. Considerable quantities are imported annually from the River Plate countries.

MANUFACTURE OF FLOUR.

4. Wheat flour manufacture is an important and growing industry, and the time seems not very far distant when the entire country south of Pernambuco will be supplied by the local mills. North of Pernambuco the United States seems to have a nearly clear field, but in the south we are unable to compete, owing to the cheap freights from the wheat-producing countries of the River Plate. We have already lost most if not all of our flour trade south of Bahia, and the rapid decline at that port seems to point to the not very distant time when that trade too will vanish. But in the ports from Pernambuco northward the United States is more than holding its own. The total flour imports of this northern region in 1903 amounted to nearly 32,000 long tons, and the United States held a virtual monopoly, supplying five-sixths of the total, while Austria-Hungary provided most of the remaining one-sixth. In the region south of Pernambuco the total consumption in 1903 was approximately 130,000 tons, the output of the local mills competing with the Argentine imports for the market. The local mills are protected by a differential duty on wheat, 25 reis per kilo on flour and 10 reis on wheat, and seem to be gaining the upper hand, for in 1903 they supplied about 35 per cent of the total consumption. In short, the competition in the flour market of Brazil is a four-cornered one between the United States, Argentina, Austria-Hungary, and the local mills. In the Amazon Valley the United States is supreme. In Pernambuco and the immediate surrounding region she meets with a little rivalry from Austria-Hungary, while the south has been captured by Argentina and the local mills, with a strong possibility that the latter will in time control the situation. The entire importation from Argentina in 1903 was 68,373 tons, which represent the amount which new mills similar to those now run by English, Brazilian, and Italian capital might hope to dispose of under present conditions of demand.

CANNED FRUITS AND VEGETABLES.

5. There already exist in Rio de Janeiro, São Paulo, Santa Catherina, and Rio Grande do Sul several establishments for the tinning and preserving of fruits and vegetables, but that they fail to meet the full requirements of the trade is proved by the fact that such goods continue to be imported in considerable quantities, mainly from

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Portugal, France, and Italy. The total imports in 1903 amounted to $250,000—30 per cent coming from Portugal, 23 per cent from France, and 21 per cent from Italy. And this although the prices of the imported articles are often absurdly high. American canned corn, for example, finds a sale in Rio de Janeiro at from 2$500 to 3$000 (80 cents to $1, at present rates of exchange) per tin weighing about 1½ pounds. California canned fruit sells at 3$500 ($1.15) per 3-pound tin, while dried fruit retails at 3$000 ($1) per kilo (2.2 pounds). All of these goods are highly protected, the duty in some cases running as high as 200 to 250 per cent ad valorem, and the local factories, relying on this advantage, are content to use the crudest and most out-of-date methods and machinery. The raw materials are to be had in profusion, tropical and subtropical fruits in the north and nearly all vegetables and deciduous fruits in the south. Sugar, too, is abundant and cheap. A few large American establishments with our most approved machinery could not only capture a large market here but could also do an export business in some of the tropical fruits, such as pineapples and the various preparations of the guava, the orange, and the quince, which are common here.

HOG RAISING AND PORK PRODUCTS.

6. The entire country south of Rio de Janeiro is eminently fitted for the raising of hogs, and maize can be grown in profusion. The conditions are, therefore, somewhat similar to those which exist in the great pork-producing section of our own country; but, except in a small way in the extreme south, there has as yet been little effort to produce here the various pork products which are so largely in demand throughout the country. In 1903 Brazil imported 3,230 tons of lard, 707 tons of bacon, and 278 tons of hams, not to mention various other tinned-meat products. Large quantities of products similar to hams and bacons are undoubtedly made in the homes of the smaller farmers in many parts of the country, though there are no statistics as to the exact amounts. A large pork-packing plant established in some hog and maize producing center, with the latest American machinery and methods, could substitute its goods for a large part of both the present imports and the local products. In fact, plans are now being considered for the erection of just such an establishment.

LEATHER AND LEATHER GOODS.

7. I have already alluded to the growing production of this class of goods. Southern Brazil is a prolific producer of hides; there is also abundant tanning material, while the prices of imported leather articles are extremely high. As a result, numerous tanneries are to be found in Rio de Janeiro, São Paulo, and in the more southern States of Santa Catherina and Rio Grande do Sul, and a considerable number of factories for the manufacture of boots and shoes, belting, harness, saddlery, and sundry smaller articles also exist. And the number and size of such establishments are increasing, indicating that they are prosperous. Yet imports continue large, the total value of leather goods purchased abroad in 1903 being $550,000, while prepared hides and skins to more than double that value were also imported. The quality of these imported goods is, in general, much superior to that of the native makes, and the prices obtained for them are high when

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measured in terms of the present rates of exchange. Shoes, for example, of makes which sell at home for from $3.50 to $5 bring from 25$000 to 40$000 here ($8.30 to $13.50). Some of the native factories, too, which have introduced American machinery and improved processes, turn out shoes which compare very favorably with our makes and which bring prices similar to those of the imported article. There is a strong probability of larger manufacture of these better grades.

HARD WOODS AND FURNITURE.

8. In this field there is a possibility of development which has as yet scarcely been touched. Brazil abounds in the greatest variety of the finest hard woods. They are so common that they are used for all the multitude of inferior purposes for which we at home use the cheaper grades of pine and similar woods—railway ties, fence posts and rails, odds and ends about the shops and farms, etc. Much furniture and cabinet work is also made, but generally in small shops or factories and by inferior methods, and for exclusively Brazilian use. Little of the hard-wood lumber is exported and none of the furniture. If American capital were to come here with the serious intention of developing the industry, timber concessions could readily be obtained and large mills and factories with modern equipment could not only build up a large domestic trade but carry on a large export trade in lumber and possibly in furniture as well.

MISCELLANEOUS INDUSTRIES.

9. A few other possible openings may be merely mentioned. The manufacture of matches is now in the hands of a trust which is said to be making very large profits through their monopoly of the market in a country where virtually everybody smokes and the consumption of matches is consequently very large. Soap is already manufactured in large aggregate quantities, but the factories are mostly small affairs with poor equipment. Large amounts of the better grades of the article still continue to be imported and find a market in spite of the seemingly absurd prices. It is impossible, for example, to buy a cake of ordinary American, English, or French toilet soap for less than 1$500 (50 cents). Tinware, mainly tins for the use of the canning industries, is made in large quantities from imported sheets, but most of it is either made by hand, or by machine processes which were long ago abandoned in our country. Earthenware tiles, used very extensively for roofing throughout the country, continue to be imported in large quantities, principally from France.

These are a few of the very many industries which are awaiting development in this country. In mentioning them I am not merely giving expression to personal opinion. I am echoing a sentiment which is everywhere in the air. The authorities are fully awake to the desirability of introducing these and many other activities. There have already been many instances in which the Federal Government has granted exemption from or reduction of the duty on machinery and other outfit for the construction of such factories, while the railroads have given reduced freights, and the State and municipal authorities have granted exemption from taxation for a considerable period. Precedent and public opinion are both distinctly in favor of such concessions, and there is no doubt that new investors will continue to be similarly favored.

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AMERICANS SHOULD RECOGNIZE CONDITIONS.

The building up of these local industries will, it must be admitted, be detrimental to the interests of American exporters of the goods in question, but at worst it will only be the hastening of a process which has already begun and is certain to continue. A country with the natural resources of Brazil, animated by a determination to build up through protection and other means all industries which the nature of the country's raw materials make possible, is certain, in time, to cease to import many articles for which it now furnishes a market. It is well to recognize this fact frankly and to take steps to reap whatever benefit may be derived from the changing conditions. If Americans do not step in and take a hand in the development others will, and the indirect advantages flowing from the control of activities here will be lost to us. The new industries will reduce the demand for certain American products, but if they are either directly or indirectly controlled by Americans or fostered by them, they will create a more valuable demand for other American products, such as machinery and other outfit, while the indirect effects of familiarizing the people with American methods and enterprise will be incalculable.

It must be remembered, too, that the building up of local industries does not necessarily mean the cessation of demand for imported goods even of the same lines as those produced by the native mills. A new country like this must build up its manufactures from the bottom, so to speak. The first steps will be with the coarser and cheaper grades, while better grades will continue to come from abroad. This is a result of inferior technical skill on the part of the workmen, poorer quality of the raw material, or the necessity which a new industry feels for a broad market such as can only be reached by selling to the great mass of the poorer portions of the population. In any case the growth of the local industries can not be a very rapid process, and the supplanting of foreign goods must advance slowly. Meantime a large market remains available and may be well worth striving for. There are also many lines of goods which Brazil can never produce herself, and the market for these remains untouched by the development of manufactures which has begun here.

At the close of my fourth report I spoke of certain statistics which I have been gathering, which would show what lines of American trade are improving and are likely to continue to improve. These figures are not yet completed, but I shall hope soon to be able to submit them.

THE FLOUR TRADE.

DECLINE IN IMPORTS EXPLAINED—COUNTRIES OF SUPPLY—GROWTH OF LOCAL MILLS.

In a letter written from Beunos Ayres August 23 Mr. Hutchison furnishes a report on the wheat and flour trade of Brazil, which contains facts and figures explanatory of the causes for the falling off of exports of those commodities from the United States. The principal cause for this decrease in our exports in wheat and flour is due to the great progress made in Argentina in the growing of wheat and in the establishment of flour mills in Brazil for converting it into flour.

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The manufacture of flour from wheat purchased in Argentina and the United States is one of the recently established industries in Brazil, and the observations of Mr. Hutchinson lead to the belief that the manufacture of flour by native mills will be largely extended in the future. His letter follows:

Since arriving in Buenos Ayres my attention has been called so sharply to the condition of the American flour trade with Brazil that it seems advisable to supplement the remarks on that subject which I made in my ninth preliminary report, dated at Desterro August 11 instant. The newspapers here are just now commenting on the decline in shipments of flour from the United States to Brazil, remarking on the growing dependence of South America on Argentina for this commodity, and predicting a cessation of the American trade. The figures quoted are from our Monthly Summary for April, 1905, and give the exports of wheat flour from the United States to Brazil for ten months ending April 30.

Year.	Barrels.	Value.
1903	457,700	$1,889,357
1904	331,309	1,568,192
1905	176,753	1,021,136

It is pointed out that a steady decline is taking place, and especial emphasis is laid upon the very great drop in 1905 as compared with 1904, the decrease being 43.7 per cent in quantity and 34.9 per cent in value. The Brazilian papers have likewise been commenting on these same figures and seeing in them the "beginning of the end" of the Brazilian market for American flour.

CAUSE FOR THE DECLINE.

It must be admitted that the figures are somewhat startling, and it is true that American exporters of flour must face the fact that a considerable part of the Brazilian market is lost to them beyond recovery. I have alluded to this in previous reports, and have explained the decline by the development of the production of flour in the Argentine Republic and the recent growth of mills in Brazil itself. I have explained also that the local industry in Brazil is likely to continue to grow until even the Argentine flour is driven from the market which it now holds. But, nevertheless, there are many reasons for believing that the conclusions drawn by both the Argentine and the Brazilian papers are too sweeping, and that there is still hope for a permanent market for American flour in Brazil.

Brazil is an enormous country, and what may be perfectly true of one portion of it may not apply to other parts. It is true that we are likely to lose our market for flour in south and central Brazil, but it does not at all necessarily follow that we may not remain masters of the situation in the north. In this connection I have gathered certain statistics, which are extremely significant. The latest figures of the Brazilian bureau of statistics available when I left Rio de Janeiro were for the year 1903. Those for 1904 were being compiled, and I

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was permitted to see enough of them to satisfy me that the figures given below, representing the distribution of imports to various parts of Brazil, give a picture of the situation which will be but little altered by the 1904 figures, except in the case of Rio de Janeiro.

IMPORTS AND DISTRIBUTION.

Wheat flour comes to Brazil almost wholly from the United States, Argentina, and Austria-Hungary. The following figures show the countries from which received and the points of distribution:

From Argentina the total receipts in 1903 were 68,373 metric tons, of which there were imported into—

	Per cent.	Metric tons.
Santos	30	20,641
Rio Grande	22	14,431
Rio de Janeiro	22	14,261
Porto Alegre	5¼	3,792
Bahia	3	2,671

From Austria-Hungary the total receipts were 7,623 metric tons, of which there were received at—

	Per cent.	Tons.
Pernambuco	60	4,638
Bahia	18	1,367
Maccio	11	844
Rio de Janeiro	2	103

From the United States the total was 38,715 metric tons, which was distributed as follows:

	Per cent.	Tons.
Pernambuco	27	10,308
Rio de Janeiro	22	8,595
Pará	22	8,389
Manaos	7	2,586
Fortaleza	6	2,394
Maceio	4	1,684
Maranhão	3¼	1,319
Cabedello	3	1,245
Bahia	2	774

DIVISION OF THE MARKET.

An analysis of these figures emphasizes the division of the market which has taken place. Ninety-six per cent of the total imports from Argentina went to Rio de Janeiro and points south of there; 95 per cent of those from Austria-Hungary went to the mid-coast ports from Bahai to Pernambuco, and 75 per cent of those from the United States went to the northern region, between Pernambuco and Manaos. The 1904 figures reveal a still more complete division of the market, for in that year the American shipments to Rio de Janeiro virtually ceased,

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being only 3 or 4 tons, and sales were confined almost exclusively to the northern section of the country.

The question naturally arises whether this division of the market is likely to remain permanent, or whether the United States will be driven from the northern market as she has been from the southern. The following figures as to cost and freights on flour imports from the three competing countries throw much light on this question:

	Metric tons.	Cost in country of origin, in thousands of milreis.	Freight, etc., in thousands of milreis	Cost per ton in milreis.	Freight, etc., per ton, in milreis.
AT ALL PORTS.					
From Argentina	68,373	11,801	1,187	173	17
From Austria-Hungary	7,623	1,726	311	226	41
From United States	38,715	7,699	1,733	199	45
AT RIO DE JANEIRO.					
From Argentina	14,261	2,331	202	164	14
From Austria-Hungary	163	38	6.8	233	41
From United States	8,595	1,538	329	179	38
AT BAHIA.					
From Argentina	2,671	483	71.3	181	27
From Austria-Hungary	1,367	288	53	211	39
From United States	774	149.5	28.9	193	37
AT PERNAMBUCO.					
From Argentina	98.9	17.7	2.6	179	26
From Austria-Hungary	4,633	1,059	178.5	229	39
From United States	10,308	1,956	392.6	190	38
NORTH OF PERNAMBUCO.					
From Argentina[a]					
From Austria-Hungary	489	109.6	124.9	224	51
From United States	16,065	3,501	865	218	54

[a] None from Argentina.

OUTPUT OF LOCAL MILLS A FACTOR.

The figures just given, so far as they relate to cost and expenses, can not be regarded as absolutely accurate. The Brazilian tariff duties are almost wholly specific, and, consequently, in making declarations for custom-house purposes greater accuracy is insisted on as to quantities than as to values, etc. But even making allowances for error, the figures are most significant. They show, first, that the cost at point of shipment of both Hungarian and American flour is greater than that of the Argentine product, probably owing to superior quality, and, second, that freights and other expenses on Argentine flour are considerably less than on American and Hungarian, the latter two countries standing nearly on an equality in this respect. The advantage which the Argentine product enjoys grows less, however, as we approach the northern ports, and probably vanishes in the markets north of Pernambuco.

These figures seem to indicate that the United States may retain its market in northern Brazil, but before we can draw a positive conclusion it is necessary to consider one other element in the competition, namely, the output of the local mills in Rio de Janeiro and other parts of southern Brazil. These mills are five in number—three in Rio de

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Janeiro, one in São Paulo, and two in the Germanized section of the country farther south—in Santa Catherina and Rio Grande do Sul. The two in the far south seem to play no part in the competition in markets to the north of them; their output is for local consumption. The four mills in Rio de Janeiro and São Paulo do, however, produce more than enough for local consumption, and their shipments to the north—to Victoria, Bahia, Pernambuco, etc.—have to be taken into account. Unfortunately there are no statistics which enable one to form any exact idea as to the amounts and destinations of these shipments, but from inquiries which I have made from those familiar with the business this much seems certain, that while some of the product is undoubtedly marketed as far north as Pernambuco none of it goes to points beyond that. And it is easy to understand why this should be the case, for the Brazilian mills stand in a position closely similar to that of the Argentine mills in regard to this northern market; their raw material—the wheat—all comes from Argentina and has to bear the freights from the River Plata to São Paulo or Rio de Janeiro, and the flour shipped northward is burdened with local freights which are even higher than the through freights from the River Plata to the same northern ports.

UNITED STATES SHOULD LEAD.

There is no good reason, therefore, why the United States should not retain its hold on the north Brazilian flour market and to enlarge it as the country grows in population and in purchasing power. Recent increases in the price of rubber, the principal export of the Amazon region, is bringing a new prosperity to that entire section, and it is safe to predict that the demand for foreign goods there will increase rapidly in the next decade, and the most important demand will be for food stuffs. It is altogether probable, therefore, that our flour exports to Brazil have reached their lowest point. We have been driven from the southern market, where conditions are strongly against us; we are likely to continue to lose ground in the mid-coast ports, where advantages are likewise with our competitors, but we may expect an increase in the entire vast region from Pernambuco to Manaos and beyond. In fact, unfavorable as are the figures quoted in the first part of this letter, they are by no means as discouraging as the papers here are inclined to consider them, for the great decrease in 1905, as compared with 1904, is largely explained by the fact that 1905 has been an off year in our entire flour export business. Our exports to Brazil did, it is true, fall off 43.7 per cent in quantity, but our total exports of flour decreased even more—53.2 per cent. Relatively, therefore, our Brazilian trade was favorable instead of unfavorable. In short, there is no cause for discouragement if our exporters will frankly face the fact that they can not compete in the southern portion of Brazil, except perhaps in small quantities of special grades of flour, and will concentrate their efforts on the great northern region.

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THE GREATER BRAZIL.

PRESENT CONDITIONS AND PROSPECTIVE DEVELOPMENTS—ANSWERS TO QUESTIONS PROPOUNDED BY BRAZILIANS.

No. IX.

Before leaving São Paulo, Brazil, Special Agent Hutchinson was solicited by several officials to give his impressions of Brazil and certain features of its trade, with the understanding that these impressions should be published in the leading newspapers of that country. Mr. Hutchinson has received much valuable assistance from the leading men of Brazil in the prosecution of his investigations, and complied with the request, preparing answers to the questions which were submitted to him. The impressions of Mr. Hutchinson thus elicited were published in the newspapers of Brazil, from which they are taken.

1. From the information which you have gathered at Pernambuco and Bahia, does it not seem to you that those States may become a good market for American machinery, especially those machines which may be applied to the sugar industry?

There can be no doubt that these northern States of Brazil are failing to make full use of the opportunities for agricultural production with which nature has provided them. Both in the cultivation of the soil and in the preparation of the product for consumption there is room for immense improvement through the introduction of up-to-date methods and machinery, and I believe this to be particularly true in regard to the production of sugar and cotton. You are quite right in your suggestion that these States might, under the proper stimulus, become an important market for the implements and machinery of the United States.

RECIPROCAL ARRANGEMENTS.

2. Might not the Governments of the United States and Brazil enter into some arrangement which would facilitate the entrance of Brazilian sugar into the American market and American machinery into Brazil?

The question of reciprocal agreements for the reduction of duties on specific articles is an extremely complicated one and involves many practical details, on which only an expert on tariff making is competent to express an opinion. But even the casual observer must be convinced that certain reductions in Brazilian import duties, provided the exigencies of the Federal revenue permit them to be made, would be beneficial not only to your country but to mine. You are in need of improved methods and machinery in agriculture and other industries; we have machinery which in many lines is acknowledged to be the best in the world. A reduction of duty on such goods would therefore help your producers and at the same time give our manufacturers a better opportunity to introduce and demonstrate the excellence of their implements and machines. This would be the case even if the reductions were general in character and not applied merely to goods coming from the United States.

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TRADE WITH THE NORTHERN STATES.

3. What products of northern Brazil might gain a market in the United States, and what means can be employed to develop the commerce between the two countries?

By "northern Brazil" I understand you to mean the coast States from Bahia to Rio Grande do Norte. The main exports of this section, as is well known, are tobacco, cotton, cacao, sugar, coffee, hides and skins, rubber (mangebeira and maniçoba), precious and semiprecious stones, carnauba wax, Brazil nuts, etc. The United States furnishes a market for a good portion of many of these articles. Cotton and tobacco of course we do not take, for we raise more than enough at home; but we import 13 per cent of your precious stones, 25 per cent of your hides and skins, your mangebeira and maniçoba rubber, your cacao, and your carnauba wax; 60 per cent of your coffee, nearly 70 per cent of your Brazil nuts, and 75 per cent of your sugar. The general character of the exports to the United States from the particular section of Brazil to which your question refers is clearly indicated by these facts, and the growth of your trade in the future must depend upon the commodities which I have just enumerated. This development must, I believe, come through efforts which you in Brazil may make by introducing improved methods and thus cheapening the products. There is little if anything which the United States can do, for we already offer the greatest facilities for the importation into our country of the goods which I have enumerated. We have a small duty of 15 per cent ad valorem on cattle hides (other hides and skins are on the free list) and an almost insignificant duty of 28 reis per pound on unrefined sugar; but all the other articles mentioned, cacao, coffee, rubber, precious stones (uncut), carnauba wax, Brazil nuts, and even cotton, are on our free list. Thus any reductions which our tariff experts might find it possible to make in justice to our home industries and our revenue requirements would be insignificant in their effect upon the exports from your country to the United States.

On the other hand, a cheapening of your processes of production would be a powerful stimulus to your export trade. The natural advantages of your country are marvelous. With soil and climate unsurpassed and a vast extent of territory, you lack only the introduction of truly modern methods into your great agricultural industries to enable you to compete with any producers the world over. Therefore, I believe that facilities or inducements offered for the introduction of capital and machinery would do more than any other one thing to improve the export trade of the States to which your question refers.

RIO AS A MODERN CITY.

4. What do you think of the climate of the city of Rio de Janeiro? Do you consider that the reputation which that capital has of being an unhealthy city is just? What do you think of its natural beauty and general prosperity?

I have visited most of the large cities of the world, but have never seen one which could surpass or even equal Rio de Janeiro in natural beauty. It is marvelous. The city itself, however, leaves much to be desired in the way of modernization. But there is no need of telling you this, for your people have already recognized the necessity and

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are making improvements with astonishing rapidity and energy. In a few years the city will be in harmony with its surroundings and will be one of the wonders of the world. As to climate, there is nothing in the situation of the city which renders it necessarily either unpleasant or unhealthy. Visiting it in the winter, as I did, I found the climate very delightful—in fact, I can think of no place which surpasses it. In summer, people tell me, it is very hot and uncomfortable, but it is hard to imagine that it should be worse in that respect than many of the cities of the United States or Europe, and the city improvements now being carried on will steadily improve conditions. Broad, straight avenues, permitting of free circulation of breezes from the bay and ocean, and rapid electric transportation, permitting the residence portion of the city to spread more and more to the surrounding hill slopes, will do much to annul whatever causes of complaint may have existed in the past. And these same improvements, supplemented by the energetic efforts of the sanitary department, of which I saw evidences on every hand, have already done much to destroy the dangers of epidemic which have given the city an unfortunate reputation in the past. Rio can not, even now, be classed as an unhealthy city, and there is no reason why, if the present efforts are continued, it should not soon take its place as one of the healthiest cities of the world.

FUTURE OF THE CAPITAL.

5. From what you have seen and the information you have gathered in Rio de Janeiro, what future would you predict for the industries of that capital?

While in Rio I visited a considerable number of representative factories and was much impressed with their general efficiency and prosperity. The management was wide-awake and progressive, the machinery (with some exceptions) was up to date, and the laborers as efficient, active, and contented as any I have seen in Europe or the United States. The two great obstacles to progress are probably the lack of cheap fuel and the high coasting freights on the raw materials for the industries, but neither of these obstacles is insurmountable. The introduction into the city of electric power will give to manufacturing the same sort of stimulus which is just now revolutionizing the industry of northern Italy and do away with much of the need for fuel, the improvement of the harbor facilities will lessen the cost of landing the raw materials, and the reduction of coasting freights can only be a question of time.

PUBLIC UTILITIES.

6. What advantages do you think the city will derive from the American company, "Light and Power," which is attempting to develop there the urban transportation, public lighting, and motive force for factories?

I have already partially answered this question and there is little to add. Such an enterprise as that of the "Light and Power" is a step in the direction of what we call, rather vaguely, "progress," and its influences, direct and indirect, are many and far-reaching. The direct results will be as already indicated, the relief of the unhealthy congestion of the city on the flat lands, by spreading the residence

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portion more and more on to the hills, the bringing in of cheap power for the operation of factories, and the better illumination of the city, its shops, and its residences. The indirect results will be none the less real, though they are hard to define. Every step which makes the city more "modern," which makes it healthier and pleasanter to live in, helps to attract attention to it and to your country generally, will bring more and more tourists to your shores and promote a more correct knowledge in Europe and the United States concerning the wonderful resources and possibilities of the country. In particular, the investment of a large amount of North American capital will help to open the eyes of capitalists in the United States to the advantages of further investments in a field which they have as yet hardly touched. Our people have many crude and false notions and prejudices concerning Brazil, and anything which can induce them to make closer examination of the real conditions here, or can induce them to travel here, will be of inestimable service to the people of both countries.

SÃO PAULO, PRESENT AND PROSPECTIVE.

7. What do you think of the State of São Paulo, its intellectual progress, its agriculture and manufactures, its cities, its railroads, its climate?

Much that I have said in regard to Rio de Janeiro and the north applies with even greater force to São Paulo. In this State you have natural advantages such as few countries enjoy; a moderate climate, unsurpassed for healthfulness; abundance of rainfall, which makes agriculture possible without irrigation; a deep, fertile soil suitable for almost any temperate or subtropical growth, and an enormous amount of available water power for the various industries which are developing. In your capital city you have a standing illustration of what your people can do on the basis of these natural resources; and what has been accomplished here is a revelation of the future of Brazil. As an American I could ask for nothing better than that hundreds of my fellow-citizens might come to São Paulo, might see its public buildings, its schools, its street-car and lighting service, its pavements, and might experience the open-armed friendliness and hospitality of your people. A few bits of personal experience would do more to promote among the people of the United States an understanding of Brazil and Brazilians than hundreds of books and reports.

On the other hand, I believe that among Brazilians, with notable exceptions, there is a general failure to understand the significance of the vast economic development which has taken place in the United States, and the multitudinous ways in which the two countries might be mutually helpful industrially. It is only within the past decade that the United States has become the greatest of exporting nations and has begun to invest its capital extensively in foreign countries. The fact is so new that we have hardly had time to grasp it ourselves, and it is therefore not surprising that Brazil fails to recognize it, yet its significance is enormous. The United States has long been the largest purchaser of Brazilian products, and there is every indication that we will continue to be such; but we might be much more than that. We might be a large investor in Brazilian enterprises; we might help to introduce into some of the Brazilian industries which have failed to keep up with the march of progress some of the methods

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which have made our home industries so successful, and we might produce for you immense quantities of the machinery which you must introduce if you would bring your activities up to date, but which you can not under present conditions make for yourselves. The activities of the two countries are in many respects supplementary, and it is most pleasant to note a growing recognition of the fact.

RAILROAD BUILDING.

IMPORTANT CONCESSIONS CONTROLLED BY GERMANS.

Consul-General Seeger says the Germans are securing control of important railroad concessions in Brazil. He deplores the loss of one particular concession, but points out the possibility of Americans obtaining others. He writes:

Some days ago I was shown by an interested party a cablegram from Berlin announcing the fact that, under the auspices of the directors of the North German Lloyd and Hamburg South American Line, a company with a capital of 23,000,000 marks, backed by some prominent German banks, had just been formed in Hamburg for the purpose of constructing a railroad through the territory indicated above, and that 5,000,000 marks had already been put to the credit of the contractors for the purpose of commencing the work immediately. The first section will traverse the territory from Blumenau to Hammonia (a distance of 75 kilometers), in which the German colonies are situated. From Hammonia the projected line will go directly north to Rio Negro, on the frontier of the State of Parana, traversing the large territories acquired by a German land association called Hansa, to connect with the Parana railway, and also a line that is projected from the State of Rio Grande do Sul. Another branch is to extend from Hammonia to Coritibanos, about 200 kilometers, which later on is intended to be connected with a post on the frontier of the State of Rio Grande do Sul.

This railroad, which cuts through a very fertile territory, will undoubtedly be instrumental in the rapid development of the commerce and trade of the State of Santa Catharina. Aside from their large land grants, the contractors will undoubtedly derive great profit from the enterprise. I know from observation in traveling through the territory that the majority of the inhabitants of this State, the many German-Brazilians not excluded, would have much preferred, in view of the future trade relations of Brazil, to have Americans embark in this enterprise, and I regret very much that this fine opportunity is lost to us. There is, however, very much to be done yet in that State in developing its resources and establishing industries and new trade relations, and I would advise "our captains of industry" not to lose sight of that solid, prosperous, and promising Brazilian State.

The establishing of the above-described railroad will undoubtedly necessitate an improvement of the port of Santa Catharina, Itajahy, and a deepening of the Itajahy River from its confluence in the ocean up to the colony of Blumenau. I have already directed the attention of Mr. E. L. Corthell, who is in Rio de Janeiro at present, to this matter, and I have urged the local authorities to confer with him. It is quite probable that this harbor, or rather roadstead, will be put in a condition for deep-sea vessels by American enterprise.

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THE COFFEE CROP.

DECLINE IN INTERIOR SHIPMENTS.

Consul-General Seeger, of Rio Janeiro, writes that the shipments of coffee from the interior of Brazil are not as large as was expected. The reasons for this were climatic and favorable financial conditions among the planters. The coffee crop statistics published in the Brazilian Review, a semiofficial paper, says the consul-general, show a total production of Brazilian coffee for the crop year 1904–5 (from June, 1904, to July, 1905) of 10,597,080 bags. The present crop (1905–6) is generally estimated at 11,000,000 bags. The shipments from the interior to ports are much less this year than was expected. One reason of this is that owing to climatic influence the harvest was somewhat delayed, and another is the fact that the planters are in a better condition financially than they have been for the last two or three years, and are not compelled to rush their crops to the market as soon as harvested. Experts declare that throughout the coffee districts of Brazil the coffee trees are in a splendid condition; that quite a good many coffee plantations that were about to be abandoned have been taken up recently and promise a good result, and that the harvest year 1906–7 may prove a record breaker.

ARGENTINA.

PERMANENT PROGRESS.

RAPID GROWTH IN FOREIGN COMMERCE—AGRICULTURAL AND INDUSTRIAL DEVELOPMENT.

The Buenos Ayres correspondent of Dun's Review, writing of the progress being made by Argentina, says there is nothing fictitious about it; that it is substantial and steady, without any boom symptoms. Discussing fiscal and revenue matters, the correspondent says:

When the budget figures for 1906 were first prepared they showed an increase over those of the present year of nearly $20,000,000, but by dint of squeezing this increase has been reduced to $7,000,000. The estimates as presented recently show expenditures amounting to $170,564,748 paper, while the revenue is shown as giving a surplus of $120,110. In the message accompanying the budget there are items of considerable interest. As regards the debt, this stood, on December 31, 1904, at external $370,772,667 gold, and internal $16,544,000 gold, and $389,174,000 paper. Another item of importance is that referring to the projected modifications in the custom-house laws by which reductions are to be made in the import duties on the following articles:

Boots, mosaics, furniture, ready-made clothing, hats and caps, reduced from 50 per cent to 40 per cent.

Blankets reduced to 35 per cent, as well as woolen goods, screws, bolts, and nuts.

Anhydrous ammonia, tin, machinery in general, and lead, reduced from 10 per cent to 5 per cent.

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Specific duties are reduced in the case of oils, starch, rice, macaroni, sardines, wood matches, kerosene, paper, nails, and hats.

The export duties on the by-products of the Saladeros and meat-extract industry have been removed for 1906.

In connection with these reductions in the Argentine tariff it is interesting to note that the Paraguayan Government has reduced the import duties on flour from 20 per cent ad valorem to 9 per cent, this being the duty imposed on wheat. The Uruguayan Government, it may be added, has reduced the import duties on automobiles from 50 per cent ad valorem to 5 per cent. This rate is to be in force for one year, after which period the duty will be 10 per cent. The duty on benzine and naphtha is also to be reduced to 10 per cent.

EXPORTS AND IMPORTS.

The trade returns of Argentina offer a very safe criterion as to the progress that is being made by, and the prosperity or otherwise of a country. In 1904 the imports stood at $187,305,969 gold, an increase over 1903 of $56,099,369, while we exported products to the value of $264,157,525, an increase of $43,173,001 over 1903. The positions of the leading countries in 1904, with increase or decrease compared with 1903, are as follows, expressed in percentages:

	Imports.		Exports.	
	Share of total.	Gain.	Share of total.	Gain.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
Great Britain	34.4	43.9	13.8	2.4
Germany	13.3	46.5	11.2	10.1
United States	13.1	46.6	3.9	25.7
Italy	10.2	30.1	1.6	.1
France	9.1	34.6	11.6	[a] 10.8

[a] Loss.

Our exports principally comprise pastoral and agricultural products. The former in the three months under review were valued at $46,672,384 and the latter at $40,285,192, being respectively 52.3 per cent and 45.2 per cent of the total exports. Some idea of the great strides made by the country can be gathered from the following returns of imports and exports and population during the past few decades:

Year.	Population.	Imports.	Exports.
1865	1,645,436	$37,401,495	$26,740,772
1875	2,161,639	57,624,481	52,009,113
1888	2,880,111	92,221,969	83,879,110
1895	3,984,911	95,096,438	120,067,790
1904	4,981,832	187,305,969	264,157,525

Thus in 1895 the imports and exports per inhabitant were $23.80 and $30.10, while in 1904 these had increased to $37.60 and $53. These figures speak for themselves and are a clear proof of the prosperity now pervading the country. Our consuming capacity is much greater, and so is our productive capacity, in spite of the fact that our population does not increase as fast as could be desired.

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DEMAND FOR BUILDING MATERIALS.

There is at the present time a very good business doing in building materials; construction is going on all over the country. In the city of Buenos Ayres alone, during the first three months of the year, permits were granted for new buildings with a total frontage of 8,000 meters. The iron and steel girders largely employed in all our buildings come principally from Germany. Then again the electrification of several tramways is taking place, but the majority of the plant and rails are being supplied by Germany. Our railways are extending in all directions, and to-day there are about 18,000 kilometers of line, the material for which has principally come from England. Recently a few orders have been placed in the United States for rolling stock in the shape of freight cars. Over 2,000 new cars have either been or are on order, most of which will come from England. One firm of English car builders has recently decided upon opening up works in this country, and that will probably mean that before long we shall cease to import any rolling stock, with the exception of locomotives; we have built our own passenger cars for several years.

As an agricultural country Argentina has made great strides, and a succession of good harvests has brought us up to the second place in the wheat countries of the world.

Among the financial projects of the Argentine Government are two of great importance to the country. One refers to our currency and the other to the unification of our external debt. Concerning the former, the actual currency is the paper dollar, nominally worth 100 cents gold, but, owing to the depreciation and conversion law, only worth 44 cents gold. It can not appreciate above this price during the existence of the present law. The total currency in circulation which has no gold guaranty behind it amounts to about $295,000,000. The Government under the terms of this law is authorized to issue more paper money against gold at the rate of $227.27 paper for every $100 gold, and at the present time it holds $73,000,000 gold, for which it has issued fresh paper money at the above rate. The project, which is expected to be brought forward shortly, is one which will create a 20-cent gold unit, which will then be equivalent to a franc, and this will then replace the dollar as our unit of currency. When the project becomes public there will be better opportunity for considering its convenience or otherwise, although from what is now generally known of the outlines of the plan, commercial circles approve of the change.

The second problem, that of the unification of the external debt, now comes forward for the second time. In 1901 it was before Congress; but as the financial houses demanded certain guaranties, the project fell through. To-day the country is in a much sounder position, and the Government has received several offers to carry through the project. The interest of 6 and 5 per cent now paid on the majority of our loans will be reduced to 4 and 4½, and perhaps on certain debts will be reduced as low as 3½ per cent. English and French bankers are interested in this matter, and in all probability we shall see it definitely settled before the end of the current year. The project is at present before Congress.

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LABOR TROUBLES.

During the past two years Argentina has had more than her share of labor troubles. Strike has succeeded strike, and to such a pass has the labor question arrived that Congress sanctioned a residential law by which the Government was authorized to expel from the country all foreigners who were considered dangerous individuals. Over two hundred persons have been sent out of the country under this law, all of them professional agitators or else anarchists. The average workingman has gained in one way considerably from the strikes, as the eight-hour working day is now general throughout the country and wages are much higher. Cost of production as well as that of living has risen accordingly, and in many instances an increase of 25 per cent has taken place in the price of locally manufactured goods. This will naturally give the foreign manufacturer a better hold on the market, as duties have not been increased; but, on the other hand, there is a tendency to decrease them little by little, so that in the long run our local manufacturers will find it difficult to compete against the imported article. This is a point which should not be lost sight of by those who intend extending their business relations to this country.

IMPORTS AND EXPORTS INDICATE HEALTHY CONDITIONS.

The total exports of Argentina for the first six months of 1905 amounted to $175,773,681, against $144,359,138 for a like period in 1904. Of the $175,773,681, $118,509,130 went in without paying duties. The exports for the first six months of 1904 show an increase of $15,539,000 over the first six months of 1903. The imports for the period under consideration amounted to $97,574,975 in 1905, and to $91,668,807 in 1904. The imports for the first six months of 1904 show a gain of $29,766,654 over the same period of 1903.

The following table of exports gives the relative positions of the countries participating:

Country.	1905.	1904.
Great Britain	$22,911,007	$18,060,341
France	21,578,451	19,668,699
Germany	21,267,209	17,632,407
Belgium	12,639,048	10,450,638
United States	7,207,716	5,134,711
Brazil	6,241,507	4,964,818
Uruguay	4,373,309	1,996,979
Italy	3,078,410	1,128,769
Africa	3,075,008	2,908,075
Netherlands	1,962,579	1,549,826
Spain	1,294,325	882,320
Chile	899,051	633,563
Bolivia	382,283	329,191
Cuba[a]	263,723	29,255
Paraguay	154,815	156,961
Other countries	8,610,697	5,386,862
Uncertain destination	59,833,943	53,145,723
Total	175,773,681	144,359,138

[a] Exports to Cuba for 1904 were probably incorrectly given.

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The imports consist largely of textiles and iron and steel wares of many kinds. Formerly large quantities of agricultural machinery were among the articles imported. In recent years Argentina has been making great efforts to establish factories at home. It will be a long time, however, before the Republic will be able to build more than a mere fraction of the machinery it will need. The following table tells the story of its imports for the time taken in the two years 1905 and 1904:

Country.	1905.	1904.
Great Britain	$31,525,800	$32,149,850
Germany	14,266,685	12,260,026
United States	13,704,562	11,152,085
Italy	10,887,153	10,396,647
France	10,227,525	8,479,781
Belgium	4,265,939	4,365,989
Spain	2,703,824	2,367,753
Brazil	2,494,124	3,215,795
Paraguay	635,965	897,506
Netherlands	461,219	477,679
Uruguay	407,842	450,616
Cuba	270,159	317,791
Chile	253,306	172,229
Bolivia	60,544	53,322
Africa	20,760	18,453
Other countries	5,389,578	4,893,290
Total	97,574,975	91,668,807

THE DAIRY INDUSTRY.

According to Spanish advices the department of agriculture of Argentina is devoting considerable attention to dairying. It has just issued an interesting pamphlet dealing with "The dairy interest of Argentina" (La industria lechera en la Argentina). In 1904 the exportations of butter amounted to no more than 19½ tons. In 1895 the figures were 494 tons; in 1901 they reached 1,510 tons; in 1902, 4,125 tons, and in 1903, 5,520 tons. Of these last Great Britain took 4,114 tons and Africa 1,213.

Animal statistics for 1895 showed 1,800,799 cows in the Republic. Four provinces, Buenos Aires, Santa Fe, Entre Rios, and Cordoba, yielded 181,320,495 quarts of milk, from which, after deductions were made for daily use, other than for dairy products, 11,266 tons of butter and 1,188 tons of cheese were made. In the four provinces named there are 310 dairies and 14 butter factories.

It would seem, from present indications, that Argentina, in fact the campos of Brazil, the llanas of the Orinoco, and the pampas of Argentina, will one day be the world's great dairy region. As development goes on there will be a demand for dairy machinery, equipments, etc., also for butter-factory outfits. The success achieved in these lines by American dairymen ought to enable manufacturers and merchants making and dealing in dairy supplies to secure a large part of the South American markets.

POPULARITY OF THE AUTOMOBILE.

The popularity of the automobile in Argentina and the increase in its importation are shown in the annexed table. It will be noticed

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that France and the United States lead in furnishing the machine, and that American manufacturers are making steady progress.

From—	1900.	1901.	1902.	1903.	Total.
United States	100	2,150	4,003	6,170	12,423
France	1,000	4,775	7,066	10,447	23,288
Germany	1,000	975	1,200	3,990	7,165
Italy	1,160	.....	2,000	1,100	4,260
Great Britain	1,250	.....	220	3,700	5,170
Austria	.....	.....	.....	300	300
Total	4,510	7,900	14,489	25,707	52,606

INVITING FIELD.

OPPORTUNITIES FOR MEN OF LIMITED MEANS.

Consul McNally, of Liege, Belgium, transmits an article from the London Daily Mail calling attention to the opportunities offered by the Argentine Republic for the investment of British capital and, of course, for the enlargement of British trade with that Republic. The article from the Mail is as follows:

A correspondent sends us an interesting account of the Argentine Republic, and, although his description is a trifle rose-colored, he seems to make a good case for Argentina as a promising field for British capital, and also for emigrants with a little money to make a start. Though Argentina does not celebrate the centenary of her separation from Spain until 1910, already more than $1,000,000 of British capital has been invested in the country, largely in railroads. The population of the Republic is about 5,000,000, and of these over 1,000,000 live in the city of Buenos Aires, so that the vast extent of land is sparsely populated, and not 10 per cent of the total area is under cultivation; yet the exports for the year 1904 amounted to $254,980,000, an increase of $41,365,000 over previous returns. One of the greatest drawbacks Argentina has to contend with is the almost entire absence of coal, which militates against her progress as a manufacturing center. A man of energy, with limited capital, can secure a competence in Argentina more rapidly than in most countries to which immigration is invited. The land is fertile and those who can purchase their farms can count upon a rapid rise in the price of land, while the railway extensions are continually opening out new districts.

CHILE.

DEMAND FOR TEXTILES.

ORIGIN, CHARACTER, AND EXTENT OF GOODS REQUIRED—A FIELD FOR AMERICAN MANUFACTURERS.

Textiles take first place, far ahead of all others, in a list of Chilean imports. They amounted to 40,150,000 pesos in 1901, when the peso was worth 36.5 cents; in 1902, to 40,076,000, or 28.8 per cent of all the imports of 1901, and 30.2 per cent of all in 1902.

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The importations of cottons were: Raw, 1,592,432 pesos in 1901, and 1,717,493 in 1902; manufactured, 20,824,716 pesos in 1901, and 19,883,377 in 1902. The total imports for the years indicated, of straw, manufactured and unmanufactured, cottons, flax and linens, wools and woolens, silk and silk goods, were as already indicated. The nations participating in trade with Chile are shown in the following table:

Country.	1901.	1902.
England	$20,239,271	$20,969,619
Germany	12,533,276	11,462,265
United States	1,474,740	1,468,358
France	4,094,849	3,317,874
Italy	1,045,635	1,511,661
Belgium	118,471	144,637
Spain	107,436	82,255
India	440,451	829,267

It is doubtful whether the figures for Germany are correct. As a matter of fact, when German returns for 1901 showed wares worth only $8,012,000 shipped to Chile Chilean custom-house returns showed goods for $11,186,000. The discrepancy is doubtless due to the fact that many Swiss, Austrian, or other goods go into Chile on German steamers booked as German.

EXPORT OF ENGLISH TEXTILES TO CHILE.

England sent cottons of all kinds to Chile in 1901 worth £744,384, in 1902, £642,667, in 1903, £875,853.

Bleached and unbleached goods form an important staple of British export. Chile takes a total of 5,000,000 pesos annually. Of gray domestics, paying 25 per cent duty, Chile took a total of 1,235,000 pesos in 1901, and 1,657,174 in 1902. Of these, England furnished, in 1901, 805,000 pesos; in 1902, 1,307,048; the United States, 229,000 and 211,348, respectively, for the years indicated; Germany, 176,000 and 124,256.

The record for white smooth shirtings (25 per cent duty) was 2,844,000 pesos in 1901 and 2,585,429 in 1902, of which England's share was 2,338,000 and 2,329,298; that of the United States, 302,000 and 180,749; Germany's, 46,000 and 15,051.

Gray Osnaburgs appear with 808,000 pesos in 1901 and 1,023,195 in 1902. In these, the United States lead with 505,000 in 1901 and 641,515 in 1902. England follows with 191,000 and 313,382, and Germany with 42,000 and 66,344, respectively.

These goods came in bales of 30 to 40 pieces, 40 yards to the piece, 25 to 36 inches wide, and sell from 58 cents to $2.16 per piece. The popular pieces are from 28 to 31 inches wide. Packing and arrangement of goods is important. White shirtings run 40 yards, packed in bales of 25 to 50 pieces, the finer qualities, in wooden cases, width 25 to 36 inches. The favorites are 31 to 33 inches, and sell from 3 to 10 cents a yard; middlings $1.20 to $2.40 a piece.

Gray and white drills run 20 to 30 40 yard pieces to each bale, the better grades from the United States, 15 pieces in a bale, and seldom or never packed in boxes; width, 25 to 30 inches; often only 18 inches, $1.20 to $2.16 per piece at factory in England. The most popular American goods go at 5 cents United States gold per yard at factory.

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Osnaburgs or gray Osnaburgs, 40 yards to the piece, 30 to 60 pieces per bale, 27 to 29 inches wide, sell at $1.20 to $1.68 per piece.

The unbleached shirting or gray drill is not specifically noted in the Chilean returns, but comes under unfinished white flannels, paying 25 per cent duties.

Of these there were imported—

From—	1901.	1902.
	Pesos.	*Pesos.*
France	70,002	34,764
England	1,390,858	1,286,454
Germany	596,025	442,137
Italy	49,790	121,088
Spain	15,270	2,754
United States	415,933	216,417

SOURCES OF SUPPLY.

In gray domestics the thick unfinished weavings from the United States were sold to wholesalers, while English finished goods went direct to the retailers. The United States is gaining rapidly, although not so fast, perhaps, as in Bolivia and Peru, where they are beginning to assume practical control of the cotton-cloth markets, particularly in certain lines—gray drills especially. In gray and white drills all this stands, but in white shirtings the States are too dear.

In inferior, cheap goods England leads. In Osnaburgs the United States has long since driven England from the field. This is true of coarse and white flannels. Quite recently Holland began to get a hold of this trade. In piqués Germany sold till Italy took a hand and began to compete successfully. In unfinished piqués the Italian are cheaper than the German; in finished piqués England leads.

COLORED OR MIXED GOODS.

Goods of one color run from 4 to 10 cents a yard and come mostly from England, the United States, and Germany. Holland sends some. Linings, paying 25 per cent duty, go in large quantities. In Chile these goods go by the name of choleta. They are either black or gray. The last figures place the importations of these goods at 230,000 pesos, of which England furnished 160,000. The English choletas run from 4 to 8 cents per yard, 28 to 36 inches wide. Satin linings, from 3 to 9 cents a yard, come from England. They are smooth and 28 inches wide. Germany sends the dearer kinds, about 1¼ yards wide or 140 centimeters, but has a sharp competitor in Italy.

Frou-frou goods go in now from England and are very popular. These are a calendered silk-like goods, not the chemically mercerized. The silk finish is furnished by running the goods through rilled or fluted rolls. England leads with cotton imitations of woolens. Colored goods and goods of one color for boys' and men's clothes run 44 inches to 51 inches in width and from 16 to 35 cents a yard, and goods 24 to 28 inches in width, selling for 8 cents to 18 cents a yard, come from Germany, England, and Italy.

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Twills, drills, etc., for men's wear went in under 25 per cent duties as follows:

Country.	1901.	1902.
	Pesos.	*Pesos.*
France	65,582	26,055
England	999,013	978,403
Germany	1,362,900	1,001,427
Italy	116,475	209,195
Spain	6,775	1,116
United States	8,561	3,646
Total	2,559,306	2,219,842

BLUE AND WHITE GOODS.

Goods woven of blue and white yarns, the so-called denims, blue drills, Colon azul and Mezclilla azul for men's and women's wear, particularly for aprons, are in large demand. The cheaper lines are bought in England, the better lines in the United States. They come in bales of 20 pieces, each 60 yards long and 24 to 27 inches wide, and range in prices from 3 to 8 cents a yard at factory. Browns are not liked, and the blues have been falling off heavily. The consumption of Mezclilla azul has dropped fully two-thirds. Those that sell now run from 4 to 10 cents a yard and measure 24 to 28 inches. The Indians and peasantry prefer the cheap, pretty prints. England, Belgium, and Germany send most of the bed coverings. The following shows the sources of Chile's bed drills, striped drills, mixed, colored, and blue-striped drills, all paying 25 per cent duty:

Country.	1901.	1902.
	Pesos.	*Pesos.*
France	20,138	9,101
England	512,267	371,144
Germany	130,938	224,147
Italy	22,296	.....
United States	18,475	30,216
Spain	5,472	6,280
Total	739,581	640,888

In these goods Germany has gone steadily forward, but very probably with goods made or bought in Belgium. In cheap, simple, double width "cotis," running from 4 to 10 cents a yard, 24 to 48 inches wide, England has hardly any competitor.

Belgium leads in 43 to 51 inch goods, worth 14 to 25 cents; in fact, is far ahead of all others. The United States is rapidly gaining ground. The so-called Coti-norte americano ticking for poor people is successfully imitated in England and thence shipped to South America.

Fancy-weave oxfords, paying 25 per cent duty, vichys, zephyrs, etc., also unfinished goods, 23.6 to 39.37 inches wide, come from England and Germany, and recently from Italy, in quite a range of prices.

In 1901 the value of these goods imported was 584,000 pesos, of which 421,000 came from England and 147,000 from Germany. In 1902 the importations were valued at 633,000 pesos, of which England supplied 548,000, Germany 66,000, and Italy 9,500. The oxfords come

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in bales of 20 to 30 pieces, 60 yards long, 25 inches wide, and in rolls 8 to 10 inches wide. The prices run from 3 to 5 cents a yard. In the very cheap grades England prevails; in the better grades, the vichys and zephyrs, Germany leads with Alsation goods. The cheapest English goods of these grades cost $2\frac{1}{8}$ cents a yard—20 inches wide.

In the finer lines of oxfords, vichys, and zephyrs the prices run from 8 to 9 cents a yard. These goods come sorted in cases of 20 pieces, single width, or 10 to 12. The Italians are sending better goods to South America than are the English—that is, in the lines under discussion. Apron cloth 39.37 inches wide comes from Germany and Italy.

CASINETAS AND PRINTS.

An important line is the colored so-called casinetas. Most of those now imported come from Germany, from München-Gladbach, the Rhine Province, and Saxony. They are sent in rolls of 20 pieces, 55 yards long, 23 to 24 inches wide. The double width ones come in rolls of 12 to 14 pieces, 36 yards long, 16 to 46 inches wide, packed in cases. The prices for English casinetas, not much in demand, run from 5 to 8 cents per yard, double widths from 20 to 28 cents; Germans, $6\frac{1}{2}$ to $11\frac{1}{2}$ cents single widths, $15\frac{1}{2}$ to 37 cents double widths. Those that sell best run from $18\frac{1}{2}$ to 26 cents. Cords (borlones), moleskins, particularly velvet cords, or corduroys, are bought, mostly from England. Germany has done a little, but of late years must yield to her new competitor, Italy. Velvets, too, take up a fairly important place among the textile importations of South America, particularly those that run in width from 18 to 24 inches. England leads in the higher grades, Germany in the middlings, her beautiful colors, brilliancy of finish helping.

Percales, or percalina, as the Chileans call them, lead among this class of goods. They come in cases of 30 pieces, 60 yards long, 35 to 40 inches wide, and sell for 4 to 10 cents a yard. England leads, and sells fine goods from 10 to 16 cents a yard. These imitate metals. Many Chilean shops prefer goods from Elberfeld, in Germany. Printed goods for clothes, shirts, and cottons, percales, cretonnes, flannels, etc., come mostly from England, 20 to 31 inches wide, and sell at $2\frac{1}{2}$ to 17 cents a yard. Germany, Italy, and Spain send some of these goods. The following table tells the story of Chile's importations of these lines in the years indicated; duty, 25 per cent:

Country.	1901.	1902.
	Pesos.	*Pesos.*
France	265,664	136,874
England	2,906,344	2,917,104
Germany	768,993	542,015
Italy	80,171	140,139
Spain	10,451	14,500
United States	5,828	10,950
Total	4,037,451	3,761,582

The English goods go in pieces of 60 yards, 24 to 30 inches wide, packed in cases containing 30 pieces. The better grades are packed in cases of 10 to 15 pieces, and the very fine goods 12 to 15. The prices run from $2\frac{1}{2}$ to 7 cents a yard.

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BLUE AND BROWN CRETONNES.

A German specialty in Chile is the blue and brown cretonnes, called percales alamanes. They are worn by the German colonists. Printed flannels have been finding favor for the last few years. Germany led along this line till England followed with cheap imitations, taking first place. Now the Italians promise soon to take second place. The flannels come packed about as the cottons or so-called kattune are packed, but in oval rather than in round rolls. In printed moleskins England leads. Both England and the United States send smooth moleskins. In twilled patterns 20 pieces are packed in a case, and are bought mostly in England and the United States. They come 60 meters long and 24 to 31 inches wide, and sell from 5½ to 11½ cents a yard for the German and 2¼ to 12 cents a yard for the English. The United States is beginning to beat England in the importations of smooth moleskins.

COTTON CLOTHS, CURTAINS, ETC.

In cotton bedspreads, coverlets, paying 25 per cent duty, Germany and England sent Chile goods valued at 280,000 pesos in 1901 and 306,000 in 1902. These have a linen finish. Most of the German goods go in under English marks or names. The popular prices for these coverlets is $7.14 a dozen. Germany furnishes the finer grades, England the coarser. For the last two years Italy has been leading with her mercerized coverlets. Other than white bedclothes are not imported ready made, but are made up in Chile. Cotton blankets, coverlets, fine and middle class goods, come from Germany. The very cheap goods come from France and Spain, the importations from England and Germany being about equal in this line. The importation for 1901 was valued at 150,000 pesos, and was about equally divided between England and Germany. In 1902 the shipments fell off to 120,000 pesos.

Curtains (lace among others) pay 35 per cent duty and come from Germany, England, and France. Furniture coverings and curtain cloth pay 25 per cent duty and come from Germany and England. In 1902 of 100,000 pesos imported by Germany and England each shared equally. Cotton tablecloths pay 25 per cent duty and come in about equal quantities from England and Germany—about 150,000 pesos annually. Italy, however, is here forging rapidly to the front in the importations of this class of goods, and it looks as if she and England would have the field to fight for.

SHAWL CLOTHS AND RIBBONS.

In cotton cloths, used like shawls, ranging in prices up to $12 each, Germany supplies almost the entire demand, which in 1902 amounted to 150,000 pesos and in 1901 to 187,000. The ponchos, traveling blankets, etc., pay 35 per cent duty and come mainly from Germany. In 1901 articles in this classification to the value of 12,000 pesos were imported, and in 1902 to the value of 11,000 pesos.

England, once strong in these lines, has had to yield to Germany. Thin goods have gone, their place being taken by flannel-like goods. Towels of all kinds come from England, Germany, France, and Italy. In 1901 there went in of these to the value of 131,000 pesos, and in

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1902, 130,000, paying 25 per cent duty. English Turkish toweling is a great favorite.

Cotton ribbons from Germany were imported to the value of 87,000 pesos in 1902, out of a total of 121,000. The duty is 25 per cent. Then there are "elastics" of cotton and rubber. These were imported to the value of 150,000 and 200,000 pesos, of which Germany and France supplied the largest part. It would seem as if the field in South America is well worth working, for what is true of Chile is largely true of all other countries.

MARKET FOR SACKS.

Nachrichten für Handel und Industrie, a leading German publication, in a recent number deals with Chile as a market for sacks. It says:

The imports of sacks into Chile in 1903 were as follows:

	Kilograms (2.2 pounds).
Indian sacks	15,559,028
Osnaburgs	139,060
Sugar sacks	171,860
Canvas	70
Sacks for metals (Indian)	786,516
Sacks for metals (Osnaburgs)	24,500
Total	16,681,034

The source of these sacks was as follows:

Country.	Kilograms.	Value (pesos[a]).
England	11,085,505	2,818,126
Germany	535,217	187,717
Belgium	8,300	2,075
Italy	80	43
India	5,046,536	1,261,634
United States	4,496	1,124
Ecuador	320	80
Peru	580	145
Total	16,681,034	4,270,944

[a] 36.5 cents gold.

In addition 216,736 kilograms, worth 100,000 pesos, of raw sacking were imported into Chile. These statistics do not furnish an accurate picture of the origin of the various kinds of sacks. For example, the English import figures show that the so-called Indian sacks come partly from Scotland, partly from India, and partly from England.

The sacks made from osnaburgs are included in the statistical tables with sacks made from "arpillera," although the two fabrics are entirely different.

"Arpillera" comes, as a rule, in pieces of 30 yards, and is not suitable for sacks, but is used for wrapping cases and other packing purposes. Sugar factories order their sacks from the factory direct. The growing imports of sacks into Chile are shown as follows:

Year.	Kilograms.	Value (pesos).
1901	11,193,000	2,238,000
1902	13,487,000	2,852,000
1903	16,681,000	4,721,000

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INTERNATIONAL EXPOSITIONS.

Mr. Edward Winslow Ames, secretary of legation and chargé d'affaires at Santiago, Chile, has informed the Department of State that an exposition of motive power will be opened in Santiago some time toward the end of the current year, under the auspices of the Society for the Encouragement of Industry, and with the approval and support of the Government of Chile. The exposition will comprise the following sections: (1) Motive power; (2) industrial uses of alcohol; (3) pumps and presses; (4) machinery for various small industries.

The following privileges will be extended: Free use of space in the exposition; exemption of duty on exhibits; payment of freight both ways; and ninety days from closing of exposition for withdrawal of exhibits.

The society especially desires the participation of American firms, and has named as its agent in the United States, with that object in view, Señor Don Wenceslao Sierra, whose address is in care of the Chilean legation, Washington.

DREDGES WANTED.

Mr. Edward Winslow Ames, United States chargé d'affaires at Santiago, Chili, advises the Department of State that the Government of Chili has included the United States among the countries in which bids are to be solicited for the building of certain dredges required by that Government. The specifications for the dredges have been forwarded to Señor Don Joaquin Walker-Martinez, the minister from Chili, at Washington.

PERU.

INDUSTRIAL AND COMMERCIAL DEVELOPMENT.

According to Les Annales Diplomatiques et Consulaires, of August 5, two great parallel movements indicative of progress are on in Peru at the present time. The one is commercial, the other auxiliary to commerce, manufactures, agriculture, and mining. They are the remarkable movements for railroad development and commercial expansion.

In 1896 Peru's imports amounted to about $19,000,000; in 1903 they had increased to $38,000,000. Great Britain ranks first in the list of countries from which Peru imports, with about $16,000,000 in 1903; the United States follows with about $5,300,000; Germany, $4,000,000; France, $1,400,000; Belgium, $760,000.

The exports went up also, but by no such bounds as the wealth of Peru would warrant. They amounted to $19,200,000. If Peru is doing all this, if she is to build railroads and to expand along industrial and commercial lines she will want many of the machines, tools, implements, etc., that have helped the United States in its marvelous work along the same lines.

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URUGUAY.

AMERICAN MANUFACTURERS ASKED FOR CATALOGUES AND SAMPLES.

Señor Nicholas G. Greggi, librarian, Union Industrial Uruguaya, transmits to the Department of Commerce and Labor a circular from that association inviting manufacturers to file catalogues and price lists with a view of placing them in the hands of consumers. The following circular accompanied the letter of Señor Greggi:

The Union Industrial Uruguaya is an association established in Montevideo, Uruguay, on November 12, 1898, with the purpose of improving the national work.

The Government of this Republic has, by decree dated June 26, 1903, declared that this corporation will be its assessor in all questions relative to manufacturing industry and in all those industrial affairs that may have some relation with the custom-house revenue.

The offices of this association are situated in a very central place of this city. The corporation has a great number of members, also a library and a reading room. It has been decided that a section of foreign industrial establishments shall be annexed to the library, and that steps shall be taken to obtain catalogues and small collections of samples, which shall be received free of charges to the association.

The catalogues shall be addressed to the manager of the Union Industrial Uruguaya, Calle Juncal 177, Montevideo, Uruguay, S. A., and they shall come accompanied by price lists with all the discounts allowed on the goods; and the corporation will put the interested parties in communication with the manufacturers without charging commission or expenses.

The manager of the Union Industrial Uruguaya will give notice by means of the daily papers of the country when any catalogues shall be received, and an index containing all the catalogues will be permanently inserted in the Corporation's Review.

Every manufacturer sending price lists should give periodically notice of alterations or discounts that may modify prices of the lists sent, and they should maintain a correspondence with the manager of the corporation.

PANAMA.

Consul-General Lee, of Panama, writes that he has been informed that the Royal Mail Steam Packet Company (England) will commence, October 19, a bimonthly service between Colon and New York via Jamaica, and that the vessels making this voyage will return to Colon via Jamaica, and then proceed to Southampton, England, by way of Sabanilla (Colombia), Trinidad, and Barbados (British West Indies). This company has been long established in communication with the Isthmus, the steamship *Severn* having arrived at the port of Chagres on June 22, 1845. The opportunity of entering into carrying competition is accepted with great satisfaction by this corporation, which has been for so many years the principal means of transportation between the Isthmus and Central America, the West Indies, and Europe.

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CENTRAL AMERICA.

GUATEMALA.

INDICATIONS OF AMERICAN ENTERPRISES.

American enterprise is making an impression in Guatemala, in which country conditions favor manufacturers of the United States, Consul Winslow, of Guatemala City, writes:

During the past few months the exporters of the United States have been doing some effective work in this Republic. There have been several commercial travelers here studying the conditions and taking sample orders. Many others have been asking for information from this consulate-general, which has been able to give valuable information. If this field is properly worked and sufficiently long credit is given, practically nothing but American goods need be found in the markets of Guatemala, for they are generally conceded to be the best. This market is worth cultivating, for the next few years will see great development here. Everything points that way, and the natural resources are great. The opening up of the new railroad to the Atlantic coast at Puerto Barrios will do wonders for the country.

GOOD PACKING.

More attention is being paid to the packing of goods shipped to this country. It is an important matter and can not have too much attention on the part of exporters. Packages should be very firmly nailed and bound by band iron, so they would be difficult to open, as there is much complaint about goods being stolen from boxes in transit. I have had several compliments of late from the custom officers for the way shipments of American goods have come packed. It will pay exporters to pack well everything they ship. Dollars spent in this line will bring hundreds in profits. This is especially true for Central American ports.

THE COFFEE CROP.

The present condition of the coffee crop is above normal, and the outlook is bright. In face of the low price of coffee and the high price of labor, which has doubled within the past two years, planters are in good spirits. It is estimated the crop will exceed 800,000 quintals. During the past three years but little coffee land has been developed, largely due to the scarcity of labor.

PROPOSALS FOR STEAMSHIP LINE.

Proposals are invited by the ministry of the interior, Santiago, Chile, for the working of a steamship line between Talcahuano and Punta Arenas. State subsidy, $80,000 per annum. Tonnage of the boats to be at least 2,000 tons freight. Accommodation for first and third class passengers, cattle, and refrigerators. Speed of vessels at least 12 nautical miles per hour. Mails must be carried free. Preference will be given to those who intend to run frequent boats, or to extend the route to Valparaiso, or who give the lowest freight rates. Fuller particulars may be obtained from the ministry.

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WEST INDIES.

THE ISLE OF PINES.

ITS GEOGRAPHY AND RESOURCES.

WEALTH IN FORESTS AND MOUNTAINS—LUXURIOUS VEGETATION.

The Isle of Pines has, for the last few years, become of particular interest to the people of the United States, due chiefly to its proximity to the mainland of Cuba, as well as its nearness to our shores, and to meet a general desire for comprehensive information regarding the island, Consul-General Steinhart, of Habana, prepared the following report:

The Isle of Pines is situated off the south coast of the western part of Cuba, between latitude 21° 24′ 40″ and 21° 56′ north, and longitude 82° 30′ and 83° 12′ west. De los Barcos, the extreme northwest point, is 34½ statute miles southeast of Punta de Carraguano (Pinar del Rio), the nearest land point of Cuba. The surrounding waters are the Caribbean Sea. The island lies about 730 statute miles across the Caribbean Sea, north of San Juan Del Norte entrance to the proposed Nicaragua Canal; 850 miles northwest of Colon entrance to the Panama Canal; 230 miles east of the nearest coast of Yucatan, and 370 miles northwest of Jamaica. The area of the island is 614.34 square marine miles, or 521,381 acres, of which the northern portion occupies 328,643 acres and the southern 192,738 acres, taking the straits of Cayo de Piedra and the bed of every large creek as dividing points. The greatest length is from the eastern extremity to French Cape, 43½ miles, and the greatest width on the meridian 76° 1′ 2″—33 miles.

MOUNTAINS AND FORESTS.

The island has a geological relation to the general chain of insular mainlands of the Antilles, but is unlike the numerous low coral and sand formations known as keys and mangrove swamps scattered in such profusion off the coast. In general, the surface is a plateau of 50 to 100 feet above sea level, broken by ridges and hills or cliffs. The most remarkable summits are the Sierra de Caballos, 1,674 feet high, the Sierra de la Canada, 1,650 feet high, Daguila, 1,500 feet high, and Mount Casas, composed of most beautiful marbles of various colors, and Mount Cristales, abundantly covered with green rock crystals. The northern part of the island is covered with pine trees, and land suitable for the cultivation of tobacco and the growing of wood of all the species known in Cuba. The southern portion is perfectly flat, and very little above the sea level. It is covered with trees of all kinds, but the land there is not desirable, and is principally occupied by fishermen.

RIVERS AND HARBORS.

The island has a number of rivers of excellent water, the most important of which, emptying on the north coast, are the Nuevas, com-

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posed of several mountain branches and streams and navigable for a number of miles, and the Casas, composed of several mountain branches, near the mouth of which Nueva Gerona is situated, which is accessible by vessels drawing 5 feet of water. Within a few miles of Nueva Gerona, to the east, is a harbor into which vessels drawing between 15 and 20 feet of water can enter, and a few miles to the west of the same point is another harbor which will admit vessels drawing from 20 to 25 feet of water. There are also several harbors on the west side of the island that will admit vessels drawing the same amount of water. To the south of the island the waters are very deep. On the northeast coast is the town of Santa Fe, located on the stream of the same name, which is also navigable for small craft.

The river Casas rises in the highlands of the north near Santa Rosalia. It flows north, passes Nueva Gerona, the capital, to which point it is navigable for the steamer which plies between the island and Batabano on the Cuban coast, and enters the sea about the center of the north coast of the island, between Fuera and Barcos points.

The Santa Fe, one of the most important streams, although not the largest, with many small tributaries navigable to Jucaro, rises about the center of the island, and, flowing northeast, enters the bight between points Fuera and Potrero. On the main stream is situated the town of Santa Fe, which has important thermal springs.

The warm mineral springs, for which the island has a world-wide reputation, judged from official and individual reports as to the curative properties, are especially noted for curing stomach and kidney diseases and rheumatic troubles. Baths are erected over the springs and the island is visited by many invalids, who find relief from the diseases mentioned.

AN IDEAL CLIMATE.

The climate can certainly be described as one of the finest on earth. In fact, the soil, climate, and water of the northern portion are ideal. The mercury seldom goes above 90°, and never below 58°. The average for the year may be stated as 75°. The sea breezes penetrate every part of the island, and, passing over the pine forests, are gentle and invigorating, tempering the heat of summer and lessening the cold of winter. The nights are generally always cool and pleasant. There is no doubt that in time, as the island becomes better known, it is destined to be a most important health and winter resort, as the conditions of the climate and vegetation combined make it attractive both to invalids and others who are in search of a more uniform temperature or who may wish to escape severe northern winters. No yellow fever, cholera, or epidemics of any kind have ever been known to make their appearance on the island. Although it is south of Cuba the temperature is somewhat lower, and it is visited both by the sick from Cuba and abroad, who come to be cured by the pure air and beneficial waters of its springs and creeks.

Cape Frances, at the extreme point of a rocky, crescent-shaped peninsula, extending into the ocean, forms the spacious bay and anchorage of Siguanea on the southwest. On the shores near the town are found in great quantities rare and beautiful shells and coral, and from this point vessels drawing 20 feet can pass northward around the island as far as Nueva Gerona, inside of the coast. The bay has a depth of water from 10½ to 33 feet. On the southern

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coast is a small harbor known as Carapachivey; on the northwest coast the bay of Barcos; and on the southeast coast the bay of Cienaga. A good anchorage can be found near Point Pedernales, where there is from 5 to 9 fathoms of water. This anchorage has been found very satisfactory. The Carapachivey Cove on the south coast is of considerable size and affords a sufficient and commodious anchorage, well sheltered to the northward. There are a number of other bays and harbors which afford good anchorage.

MEANS OF COMMUNICATION.

The best way to reach the Isle of Pines at present is via Habana, viz, by rail from Habana to Batabano, 36 miles, and thence by regular line of steamers to Nueva Gerona, about 54 miles. The nearest cable station is at Batabano, but the establishment of a wireless-telegraph station with the Isle of Pines has been approved by the authorities of Cuba, and will soon be erected. Telephone lines connect Nueva Gerona, Santa Fe, and Jucaro.

The roads and trails extend to all parts of the island, beginning at Nueva Gerona; and they are in fair condition and easily kept so. During the government of intervention, a very fine road was constructed from Nueva Gerona to Santa Fe, the principal towns of the island.

Commodious docks were also constructed during the period of intervention at Jucaro on the northeast coast and at Nueva Gerona on the north.

POPULATION AND TOWNS.

The population of the island at present is about 3,600.

Nueva Gerona, the capital of the island, is on the left bank of the Casas River, about 2 miles above its mouth, on the north coast. It is advantageously situated on a most picturesque plateau between the Caballos and Casas mountains, at the base of the latter and about 30 feet above the sea. It is well drained, exposed to the sea breeze, and free from malarial influence. The water comes from a magnesian spring, and is very beneficial in stomach troubles. Baths have been built, into which the water from the spring is conducted. The bathing establishment is the property of the ayuntamiento. There are 6 schools, public and private, with 6 teachers, and over 100 pupils.

Sante Fe is located on both banks of the river of the same name, about 11 miles south southeast of Nueva Gerona and 7 miles from the port of the town of Jucaro. We find here thermal baths of blood temperature, medicinal springs of magnesia and iron, which are most favorably known. There are 4 schools with 4 teachers and about 80 pupils.

Jucaro, the port of Santa Fe, is located on the river of that name and 7 miles from Santa Fe, with which town it is connected by a very fine road.

In addition to this, there are about thirty more small towns, villages, and hamlets scattered throughout the Isle of Pines.

AGRICULTURAL RESOURCES.

The island produces fruits of all kinds, and certain parts are probably as well adapted to tobacco culture as that of the famous "vuelta

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abajo" district of Cuba. The rich arable land scattered among the hills is especially suitable for tobacco, although it can be used also in the cultivation of sugar.

Exports from the island during the past year were not very large, owing to want of transportation facilities, which want is now being supplied by new steamship lines to the United States and Cuba.

The soil is so fertile, and the climate so salubrious, that all the fruits and vegetables of the tropics, and nearly all the vegetables and some of the fruits of the temperate zone can be grown.

Poultry and live stock do very well all the year round. Hogs fatten on the wild fruits and palm nuts, and cattle on the rich grasses. The island appears specially fitted for grazing, and in time will doubtless become an important source of supply of cattle and sheep for the West Indies.

MINERALS.

There is an unlimited amount of different grades of marble, suitable for a great variety of purposes. Both the coarse and fine grain marbles appear to be remarkably free from cracks, and slabs of any desired dimension can be obtained. The veins are from 5 to 25 feet in thickness, so that the size of the block would be limited only by the purpose for which it was to be employed. The conditions for coloring are exceptionally favorable.

Certain portions of the island contain a large amount of disseminated manganese. In some places, as at Santa Fe, this manganese has become concentrated, forming deposits of unknown extent, which may some time become valuable.

In the Cerro de la Siguanea, and probably elsewhere on the island, siliceous schist, containing veins of very pure brown hematite, are found. Masses of this ore are scattered over the surface in considerable abundance, and while no deposits of iron ore commercially valuable have been discovered, the indications are favorable for the existence of such deposits, especially in the western portion of the island.

SAND AND BRICK CLAY.

Beaches on the northern portion of the island are made up of sharp white quartz sand. This would form an excellent sand for building purposes and for making artificial stone. It is also adapted for marble cutting and has been successfully used for that purpose.

The terraces in the vicinity of Nueva Gerona at an altitude of 50 feet above the tide are covered with red and gray sandy clay, and this has been utilized to a great extent for manufacturing brick and tiles. It is most probable that with proper manipulation a good quality of brick can be made from this clay.

INDUSTRIES.

The mechanical industries are tobacco manufacturing, quarrying, cutting and sawing lumber and working same into poles and railroad ties, and charcoal burning. The quantity of mangrove and other scrubby wood available for charcoal and cord wood, is practically unlimited, as all the coast of the island and the keys to the north are

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covered with this growth. Other industries are fishing in the adjacent waters, which abound in fine marketable fish, including lobsters and turtles. There are also sponge fisheries.

The raising of horses, which, though small, are hardy and good roadsters, and of cattle and pigs, are important occupations. The valleys and hillsides furnish nutritious grasses.

BANKING AND CURRENCY.

In May, of the current year, the Isle of Pines Bank, of which Thomas J. Keenan is president, opened its doors for business.

The patronage received up to date warrants the statement that the necessity for a bank has long been felt by the people of the island. Both American currency and the commercial currency of Cuba—that is, Spanish gold and silver—are in use. The American currency is always at a premium, say about 35 per cent, in comparison with Spanish silver.

There are no public lands to speak of, except about 63 lots of 50 acres each in the vicinity of Nueva Gerona, which are practically worthless, and contain nothing but mangrove scrub, dwarf palmettos, and thin pine grass. These lots are the property of the ayuntamiento of Nueva Gerona.

TRINIDAD.

PROFITABLE COMMERCE.

RELATIVE SHARE OF THE UNITED STATES AND CANADA.

A recent report from the commercial agent of the Dominion of Canada in Trinidad gives some interesting details concerning the imports into that colony and the parts taken therein by the United States and Canada, the agent making no mention of the share of the United Kingdom therein. In reaching out after foreign trade the Dominion very naturally begins with the British West Indies, and nothing is left undone which can in any way help to increase Canadian trade in these islands.

The British West Indies being at "our doors," so to say, and our commercial relations being so well established, our exporters and manufacturers are apt to consider those relations fixed to continue without any special effort on their part. For these reasons the special efforts being put forth by our northern neighbors to cut into our trade in the British West Indies—to cut into the trade of the "mother country" as well as ours, for in this matter the Canadians do not discriminate—will be of interest to our factories dealing with Trinidad to have their attention drawn to some of the statements made by the Canadian agent in that island.

PRINCIPAL ARTICLES IMPORTED.

The following statement, prepared by the Canadian commercial agent, shows the principal imports of manufactured articles into Trinidad during the year ended March 31, 1905, and the amounts imported

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from the United States and Canada separately, the figures representing pounds sterling:

Articles.	Total imports.	Imports from United States.	Imports from Canada.
	Pounds sterling.	*Pounds sterling.*	*Pounds sterling.*
Boots and shoes	47,676	19,590	127
Cord and twine	9,428	1,385	2,976
Furniture	17,420	4,340	642
Hardware	117,376	18,968	255
Manufactures not elsewhere specified	97,637	21,730	3,316
Paper, writing	7,336	934	439
Paint	7,468	1,347	585
Soap	31,968	5,175	1,335
Timber	83,620	65,305	16,520
Textiles	61,296	4,502	126
Leather, unmanufactured	10,169	1,894	3,398
Leather, manufactured	3,058	681	314
Machinery	41,871	6,385	12
Total	536,323	152,236	30,045

Reduced to American currency, the total imports of the foregoing thirteen articles amounted to $2,610,016, of which the imports of the United States figured for $740,856 and those for Canada for $146,214. Irrespective of Canadian effort or its trade, as shown in the foregoing statement, a few of the principal imports deserve consideration on the part of our manufacturers.

The total value of nine articles of import into Trinidad—boats and shoes, furniture, hardware, leather not manufactured, manufactures not specified, machinery, soap, textiles, timber—amounted to about $2,477,690, to which the United States and Canada contributed only about $843,907. It is fair to assume that nearly all the remainder of these imports were British goods. There is not a single article in those selected wherein our manufacturers do not excel, cottons perhaps excepted. We compete in the British market against British goods of the same classes. Nothing but our inattention to the Trinidad markets can, therefore, account for this trade condition, and what is true of Trinidad is just as true of our trade relations in many other places.

In provisions and breadstuffs, as a matter of course, the field has been ours, for the "mother country" has no interest in this portion of the trade of Trinidad, and Canada thus far has had very little effect thereon. Of the total imports of flour into Trinidad during the year under consideration ($772,000) American flour figures for $755,000 and Canadian flour for the balance.

CORDAGE AND FURNITURE.

The Canadian agent draws attention to the fact that cordage and twine from the Dominion is displacing American cordage and twine in the Trinidad markets, and gives the following advice to Canadian cordage manufacturers.

Canadian cordage and twine appear to have permanently displaced the United States, being second only to the United Kingdom. The quality received from the Dominion is what is known as patent manila. It is suggested that it would pay manufacturers to turn their attention to sisal hemp, as there is a considerable sale of sisal rope here.

Furniture continues on the up grade, and is advertising itself. Chairs of good quality at a moderate price and suitable for local

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requirements are being supplied in quantities. The increase in manufactured articles unenumerated is principally to be attributed to the steady demand for the excellent corn brooms which Canada turns out.

It is hard to see how the increase in enumerated manufactures can be attributed to the steady demand for Canadian brooms, seeing that the whole share of Canada in this unenumerated trade was only about $15,000 in a total import of $485,000, while the United States figured for $105,000.

TRADE FOR THE YEAR.

The total trade of Trinidad for the year 1904, as compiled in the Bureau of Manufactures from British official returns, was as follows:

Countries.	Imports.	Exports.	Total trade.
	Dollars.	*Dollars.*	*Dollars.*
United Kingdom	4,597,869	2,943,259	7,541,128
United States	3,288,781	4,498,106	7,786,887
Canada	580,087	209,746	789,833
France	395,160	1,570,906	1,966,066
Germany	243,325	253,545	496,870
Venezuela	2,111,574	975,247	3,086,821
All other countries	1,078,173	519,696	1,597,869
Total	12,294,969	10,970,505	23,265,474

The trade of Trinidad with Venezuela is, in the main, a "transit trade;" that is, the imports from Venezuela are simply passed through the island for Europe and the United States, while the exports to Venezuela are American and European goods passed on to Venezuela, and a portion of these from "all other countries" and the exports to the same, the imports being cleared as entered for consumption in the island, which shows a trade worth cultivating.

BRITISH GUIANA.

DISSATISFACTION WITH CABLE SERVICE.

Vice-Consul Mitchell, of Georgetown, Trinidad, writes that the people in the island of Trinidad are dissatisfied with the present methods of transmitting cable messages. He says:

The West India and Panama Telegraph Company, which is paid an annual subsidy of $21,600, subject to deductions pro rata for interruptions, keeps this colony in telegraphic communication with the outside world by means of a cable between here and Trinidad, but this line has become unserviceable, and is so often broken, sometimes for weeks together, that the business community has become intolerant of the uncertain service. The feeling is therefore strongly in favor of any system of wireless telegraphy that would be "fairly reliable," and it is the intention of the Government to offer a reasonable annual subsidy for such a service. The subject of cable communication will be discussed by the Government in a few days, and I shall keep the Department advised of any future developments.

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NORTH AMERICA.

THE DOMINION OF CANADA.

OUTLINE OF PROGRAMME FOR TARIFF REVISION.

SCOPE OF INQUIRY BY THE COMMISSION—FREIGHT RATES AND AGRICULTRUAL MACHINES IN THE NORTHWEST.

Special Agent Pepper, writing from Winnipeg, Manitoba, September 2d, furnishes an interesting letter in regard to conditions in that section of the Dominion of Canada, and also supplies news relating to the work of the tariff commission, whose sessions will begin in Winnipeg September 7. The list of questions sent out by the minister of trade and commerce in a circular letter and which indicate the scope of the inquiry, will be read with interest. Mr. Pepper's letter follows:

The tariff commission of the Dominion government begins its hearings in Winnipeg on September 7. This commission is composed of the minister of finance, the minister of customs, and other members of the cabinet. The importance of these hearings is that they are preliminary to the general revision of the Canadian tariff which the government has announced will be made in 1906.

Some significance is attached to the fact that the commission is to begin its work here in Manitoba, which is the gateway and distributing center of the northwest that is being opened up to settlement. Geographically and through the railway systems Winnipeg controls the trade of this section of the country. An indication of the volume and extent of this trade is had from the knowledge of the importations. In 1903 the duties collected at the Winnipeg custom-house amounted to $2,252,000; in 1904 the total was $2,725,000. For the current year they are expected to exceed $3,000,000. The total of the imports entered at Winnipeg in 1904 was $14,300,000. This year I am informed that they probably will exceed $17,000,000. In addition to the collections at Winnipeg the customs dues paid at Regina, Lethbridge, and Calgary are in excess of $600,000 annually, and the total importations are upward of $6,000,000.

A large proportion of the entries at all these custom-houses is of goods from the United States, and of these imports farm machinery and all kinds of agricultural implements constitute the bulk. The Canadian market for farm machinery may be said to lie largely in this section, where the competition is between the manufacturers of the Mississippi Valley and the States bordering the Dominion and the Canadian manufacturers, the majority of whose plants are located in the Province of Ontario. As an illustration of the competition it may be stated that there are in Winnipeg eight agents of threshing machines and similar articles manufactured in the United States and the same number representing Canadian firms. The number of representatives of firms manufacturing binders, reapers, plows, etc., in both cases is larger.

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SCOPE OF TARIFF INQUIRY.

From this statement it may be seen that the announcement of the tariff-commission hearings in so far as relates to the northwest is of the greatest interest for manufacturers and buyers of agricultural implements. Under date of August 26 the minister of trade and commerce in Ottawa addressed a circular letter inviting persons interested to appear before the commission and give their views, or to submit their opinions in writing. As an indication of the scope and range of the inquiry, and perhaps of the tendencies, I subjoin the list of queries contained in the circular letter. They are as follows:

(*a*) The extent (approximately) to which cost of goods imported is increased to the ultimate consumer over and above the amount of the tax imposed, as far as you can ascertain. This, it is presumed, will depend largely on the number of hands through which goods pass before reaching consumer.

(*b*) Effect of heavy duties on quality of goods imported. How far do producers try to meet duties by reducing quality of goods?

(*c*) General effect of heavy duties on trade and commerce. How far is the total consumption of such goods likely to be diminished by the rise in price, including goods of same kind produced in Canada?

(*d*) Result in your judgment if duty was totally abolished on class of goods in which you chiefly deal?

(*e*) How far are the disadvantages of which Canadian manufacturers complain of a temporary or a permanent character?

(*f*) How do prices of goods imported by you at present compare with prices paid for articles of equal quality ten, fifteen, or twenty years ago, and to what causes do you attribute rise or fall in price, as case may be?

(*g*) To what extent, if any, do you find that goods now imported are being sold below cost of production? In what sorts of goods and from what countries have you found this to be the case?

LIVELY INTEREST IN THE COMMISSION.

Comment of a political nature has been made on the action of the tariff commission in selecting the present time for beginning the inquiry in the agricultural region. The Manitoba Grain Growers' Association suggested that the commission should not sit in Manitoba before November 15, since during September and October the farmers of the west would be too busy getting in their crops to attend the sessions of the commission or to formulate their views. Representatives of the Canadian manufacturers are taking a lively interest in the approaching sessions of the commission. Generally the commission is credited with seeking increased duties, though the degree to which there is a concerted movement to this end can only be determined when the testimony is heard. The present tariff on steam engines, thrashers, windmills, farm wagons, and heavy machinery generally is 25 per cent ad valorem. On mowing machines, harvesters, binders, reapers, attachments, plows, etc., the duty is 20 per cent ad valorem.

The manufacturers who are said to want increased duties are credited with the purpose of securing the trade of the settlers who have come

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into the Canadian northwest from the United States during the last four years in large numbers. These settlers quite generally prefer the farm machinery to which they have been accustomed in the States. Usually they insist on having it even in the case of firms which have established branch manufactories in Canada and which offer the output of these subsidiary plants. Many of them insist that the branch United States plants do not turn out as good an article as the parent concerns. I have taken the opinions of a number of agents and others representing both the United States and Canadian firms, and, while allowance is made for different points of view, there is substantial unanimity on many points. One of these points is that the preference of the settlers from the United States can not be readily changed, provided the home manufacturers continue to supply machinery of superior quality.

The views differ widely as to how far they can continue to supply this market should the tariff be increased. The most commonly accepted opinion is, as I have found it, that under the existing rates the Canadian manufacturers may look for an enlarged market for wagons, reapers, binders and similar classes of implements. In thrashers the large concerns in the United States can hold their own, but the smaller ones are at a disadvantage with their Canadian competitors. In plows it seems to be generally agreed that the Illinois firms which have been in the northwest for many years can keep this market as against the manufacturers of Ontario. The soil of Manitoba and the other northwestern provinces is similar to the prairie soil where the plows can be tested, while the output of the Ontario factories has not this advantage.

INFLUENCE OF FREIGHT RATES.

The large amount of railway construction now under way, and which is likely to continue for at least three years, also offers encouragement to the manufacturers of the United States. Grading machinery, steam plows, and steam shovels will be in steady demand, and the Canadian factories have not yet been able to drive out their competitors from across the line. A question has been raised whether the freight rates from the United States is not one means of compensating the manufacturers of the Mississippi Valley for the tariff duties. This does not appear to be the case. The freight charges from St. Paul, 40½ cents per hundred in carload lots, are alleged to be too high, but from more distant points they are declared to be reasonable. However, whatever rate is made usually is met by the Canadian roads, though the haul is longer. As an illustration the rate from Port Huron, Mich., via Chicago to Winnipeg is met by the Canadian roads from Sarnia around North Bay.

AMERICAN AGRICULTURAL MACHINES.

Concerning the buying capacity of the new northwest, with its steady agricultural development and regardless of prospective tariff changes, the situation is admittedly encouraging for the manufacturers of agricultural implements in the United States as well as in Canada. The nervousness which was felt by the banks of Montreal and Toronto during the early summer because of the overextension of credits in the northwest has disappeared. The wholesale merchants had laid in

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stocks that were thought to be too heavy and the country storekeepers were carrying whole communities which were using the crop proceeds to buy more land instead of paying their debts. A sharp contraction of further credits on the part of the banks and a warning to their customers to enforce collections caused a temporary uneasiness, because it was felt that a poor crop would result in a mild panic. Happily, however, the crop is an unusually good one, and it is believed will reach 85,000,000 bushels. It affords the farmers the means of paying their debts and of making the purchases which are necessary for the further cultivation of the wheat lands.

In conclusion, without hazarding any views on the testimony that is likely to be submitted to the tariff commission at the sittings in Winnipeg, permit me again to call attention to the importance of these hearings not only to the manufacturers of farm machinery in the United States, but to all firms which are doing an export business with Canada and which are therefore vitally interested in the general revision of the Canadian tariff that is foreshadowed by these hearings.

INDUSTRIAL EDUCATION.

VALUE OF TRADE AND INDUSTRIAL SCHOOLS.

Consular Clerk Murphy, of St. Catherines, Ontario, directs attention to the value of trade and industrial schools, and quotes Mr. Heinrich Back, a distinguished German instructor. Mr. Murphy writes:

During the year 1904 the United States was visited by an unusually large number of German experts, attracted principally by the exposition at St. Louis. Of the trained experts thus sent to us by the German Government none was more alert and at the same time more liberal and free from prejudice than Mr. Heinrich Back, director of the industrial school at Frankfort on the Main. This gentleman had been sent on a similar mission to the United States eleven years before this second visit, a fact which considerably increases the value of his opinion in regard to the progress which has been made in the United States in the matter of industrial education during the past decade.

Since his return to Germany Director Back has contributed to the Frankfort Zeitung a series of interesting articles on the subject of American schools, in which, after referring favorably to our public school system, he expresses surprise that the Government in America has not taken another important step forward by providing for the training of its citizens in special directions instead of leaving the establishment of trade, industrial, and technical schools to the enterprise of individuals or the generosity of philanthropists. The result of this lack of united and centralized effort and of this reliance upon benevolent impulses is that a comparatively small number of very excellent trade, industrial, and technical schools are now doing good work in certain favored parts of the United States, while in other much larger sections of the country little opportunity is offered to boys of the poorer classes to obtain practical and thorough instruction and to increase their value to the country by converting themselves into trained workmen. Germany has, perhaps, few such schools as the Drexel Institute in Philadelphia, the Pratt Institute in Brooklyn.

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and the Boston Institute of Technology, but the various German governments maintain systematically in every part of that Empire good trade, industrial, and technical schools, whose business it is to drill the youth of the country and to send them out, each an expert or a trained specialist in some particular direction, to play a useful and intelligent part in the great battle of international competition.

Mr. Back admits that during the past decade much has been accomplished in America, and that Americans now realize more than ever before that success in industrial competition is dependent upon a system of education and training which must satisfy all modern requirements.

In concluding his articles Director Back sums up his opinion of the situation in the United States as follows:

It seems to me probable that if in the next decade the present rate of progress in the extension of industrial education is maintained in the United States a remarkably favorable influence will be exerted upon the trade of that country, and that this development will not be without danger to the competing commercial nations of the Old World.

DEVELOPMENT IN BRITISH COLUMBIA.

RAPID PROGRESS IN RAILROAD CONSTRUCTION.

According to Consul Dudley, parts of British Columbia are progressing rapidly. The Canadian Pacific and the Great Northern railway systems are vieing with each other in work that is sure to mean a great deal to that part of the world. He writes:

The work of developing the south central portion of British Columbia is going forward by leaps and bounds. The Canadian Pacific Railway has a large force of men at work constructing a branch line from Spence's Bridge southeastward to Nicola, a distance of 60 miles. This road will give access to a region extremely rich in minerals, and will open up much fertile land especially adapted to fruit culture.

Another company is now constructing a line from Midway on the Boundary to Vernon. This road will follow the waters that flow from Okanagan Lake to Penticton, at the foot of the lake, then follow its shores to Vernon. At Midway this line will connect with the Canadian Pacific, so that shipments from the most productive fruit-growing district may be made to the prairie country in the Northwest Territories, and direct shipments will be made by this line to the coast. It will also connect with the Great Northern line, opening an outlet for produce to Spokane and eastward.

The Great Northern Railway is now constructing an extension of its Kettle River line from Grand Forks to Franklin Camp, 45 miles distant. This road will open one of the richest mining districts in this Province. The Great Northern has now secured the necessary legislation and is already at work upon the line from Midway to Vancouver, thereby giving this city direct communication with the Similkameen and Boundary districts. This means very much to the people of Vancouver, and the real estate men are already discounting the future.

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RENEWAL OF STEAMSHIP CONTRACT.

Consul-General Foster, of Ottawa, advises the Department of State that on August 14 the Canadian minister of trade and commerce entered into an agreement with the Union Steamship Company, of New Zealand (Limited) as managing agents of the Canadian-Australian Royal Mail Line, for the continuance of the Australian steamship contract for a further period of one year from the first day of August, 1905. This renewal contract provides for the same four-weekly mail service to be furnished for a further term of twelve months from the first day of August, 1906, unless either party gives notice three months before July 31, 1906. The Canadian Government is to pay a subsidy of £37,090 18s. 2d. per annum, this being an increase of £3,000 upon the Canadian subsidy previously paid. A like increase of £3,000 is to be made to the subsidy paid by the Australian Government. The total subsidy under this new arrangement to be received by the Canadian-Australian Royal Mail Line from the different governments is, it is understood, £64,500.

BOUNTY ABOLISHED.

Consul-General Foster also reports the abolition by Canada of the bounty formerly paid to the producers of steel rails. This bounty has been claimed and paid under subsection B, section 1 of 3 Edward VII, chapter 68, which reads as follows:

(*b*) On rolled angles, tees, channels, beams, joists, girders, or bridge building or structural rolled sections, and on other rolled shapes not round, oval, square or flat, weighing not less than thirty-five pounds per linear yard, and also on flat eye-bar blanks, when sold for consumption in Canada, a bounty of three dollars per ton.

The order in council practically amends this statute by adding the words: "Provided always that no bounty shall be paid under this subsection upon steel rails." The bounties upon Canadian pig iron and upon steel ingots made from Canadian pig remain, however, in force. These bounties are for the fiscal year 1906 (under the sliding scale by which they are determined), 55 per cent of $3 each, viz, in the aggregate $3.30 per ton upon the steel. The present production of the rail mills at Sault Ste. Marie, Ontario, is claimed to be at the rate of 500 tons a day, and at Sydney, Nova Scotia, 350 tons.

REDUCED RATES ON GRAIN FOR EXPORT.

On August 11 the Canadian board of railway commissions made an order establishing freight rates on grain and grain products from Ontario for export. Consul-General Foster, of Ottawa, says that it will, it is thought in Canada, have the effect of bringing freight charges into line with the rates from Chicago and other points in the Western States. The Philadelphia rate has, so Consul-General Foster writes, hitherto applied from Western States to Montreal for export, but shipments from points in Ontario have been subject to the so-called New York basis, which is said to be somewhat higher than the Philadelphia rate. "The Ontario millers," writes Consul-General Foster, "claim to have been thus placed at a disadvantage as compared with their American competitors, and the present order has been rendered

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upon the complaints of the Dominion Millers' Association, under the railway act of 1903, in order to do away with this alleged advantage."

HYDRAULIC CARTRIDGES.

Consul-General Holloway, of Halifax, reports that the Dominion Coal Company (Glace Bay, Nova Scotia) is testing a machine intended to take the place of explosives. It is a hydraulic cartridge, said to be successful in Great Britain. At present coal is blown down with powder after the undercutting is completed. In the use of the cartridge, after the undercutting and shearing are finished, a hole of 3½ inches in diameter is bored in the coal parallel with the roof, wherein the cartridge is inserted. A piston operates at one end and a pump at the other. The pump forces the water along a tube until it comes in contact with the first piston and pushes it out. The pressure becomes general on all pistons, which commence to penetrate the coal in a downward direction. The pistons are set very close, there being scarcely half an inch between them. As the pressure increases the coal gradually leaves the roof and falls to the floor in the best salable condition. When the powder is used in blowing down coal there is considerable waste through breakage into dust and slack. It is claimed that this element of waste is greatly eliminated by the use of the cartridge, and 40 per cent more salable coal is produced than by the ordinary methods of mining. The weight of the entire apparatus is 44 pounds. One man can operate it. The amount of water required is from a pint to a quart, according to the pressure needed to bring down the coal. The water is stored in a little reservoir attached to a pipe, and runs to the bottom of the pump. The machine is supposed to be especially serviceable in long wall and pillar work.

COMBINATION OF DRUG HOUSES.

The wholesale drug houses of Canada, 17 in number, are to be combined in one company, with capital stock of $6,000,000 and headquarters in Montreal. It is expected that the project will be completed by the first of next year. This is announced as resulting from the formation of the Wholesale Druggists' Association, and to be with the idea of economy in carrying on the business. In places like St. John, where there are several wholesale drug houses, one will gradually absord the others. Three members of the Wholesale Druggists' Association have been here consulting the local men and getting options. It is said 16 of the 17 dealers in Canada have agreed to join the company.

BIG PULP MERGER.

One of the biggest of pulp mergers in the history of Canada was recently perfected at Montreal, whereby a number of companies operating in Newfoundland, having an aggregate area of a million and a half acres of pulp lands, surrendered their interests to a company in which the controlling interests are held by a group of British publishers, capitalized at £1,000,000. The companies affected are the Reid Newfoundland Company, the Exploit Lumber Company, the Newfoundland Timber Estates Company, and the Newfoundland Lumber and Pulp Company. Public opinion in Newfoundland, which opposed the recent grant to the Harmsworths, is said to be in favor of the present merger.

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CONDITION OF CROPS.

Commercial Agent Hamilton, of Cornwall, furnishes the following statement about crops in Ontario:

The wheat crop is large and was harvested early, yielding an average of 23.2 bushels per acre.

The oats yield was very large, one of the largest in years, averaging 38.5 bushels to the acre.

The season has been a most remarkable one for hay and clover, and the yield will greatly surpass any other years, the average will be 1.90 tons to the acre.

The reports are that the corn crop will be favorable; no estimate of the yield for silo and for cob.

Potatoes show a large yield, seldom surpassed; a few rotten from wet weather. It is too early to estimate the yield of corn and potatoes.

Labor throughout the Province is very scarce and wages high, farmers paying for experienced hands from $30 to $40 per month.

The yield of other crops, viz, barley, spring wheat, rye, peas, beans, flax, hops, and tobacco, are about as usual—no increase of any consequence.

MEXICO.

RAILWAY CONCESSIONS.

LIBERAL GRANT TO A MEXICAN COMPANY.

Consul Morawetz, of Nogales, reports that the Mexican Government has recently granted a concession to an American company to build a railway from Alamos, Sonora, to Guadalajara, in the State of Jalisco. The length of the road is 745 miles and it must be completed within seven years. Four hundred kilometers (248 miles) must be built and in operation within two years. From Guadalajara the line will run in a northwesterly direction, crossing the Sierra Madre east of the port of San Blas, thence northerly to Mazatlan, Culiacan, and Alamos. At the latter city connection will be made with the Cananea, Yaqui River and Pacific Railway, which is now being built from Guaymas to Alamos. From Guaymas the Sonora Railway is in operation, crossing the international line at Nogales and connecting with the main line of the Southern Pacific Company at Benson, Ariz. Owing to the engineering difficulties in crossing the Sierra Madre, it will be very expensive to build portions of the road and its total cost is estimated at approximately $25,000,000.

The Mexican Government has granted the company a subsidy of 12,500 Mexican pesos per kilometer, equal to $10,000 gold per mile. The road will develop large agricultural and mining districts and connect the Pacific ports north of San Blas directly with the capital. In order now to reach the City of Mexico from the Pacific slope it is necessary to cross the Sierra Madre on mules or go by steamer to Guaymas, thence entering the United States at Nogales and reentering Mexico at Ciudad Juarez. I am informed that the 400 kilometers that must be completed within two years will be built north and south from the port of Mazatlan, Sinaloa.

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The building of this road will create an increased market for mining and agricultural machinery and manufactures of all kinds, most of which should be furnished by the United States.

EXTENSION OF TELEGRAPH SYSTEM.

Consul Kaiser, of Mazatlan, reports that an extensive system of telegraph construction has been decided upon in the State of Mazatlan. He writes:

The general administration of telegraphs, in concurrence with the office of communications and public works, has ordered that they proceed to construct an extensive net of telegraph lines in Lower California, touching every principal city or town of that Territory. Further, in view of the good results obtained by the system of wireless telegraphy which has been installed in Cabo Haro and Santa Rosalia, it is resolved to put in new installations in different places on the coast of Lower California in combination with other stations which will be established in Sonora and Sinaloa.

It seems that Topolobampo has been selected to install there one of these stations, which has been done to specially oblige the representatives of the Kansas City Railroad Company. The inspector of telegraph lines is working actively to carry into effect the designs of the secretary of communications.

THE NEW TARIFF.

Consul-General Hanna, of Monterey, writes that the Mexican new tariff went into effect on September 1, 1905. It appears that the duty has been considerably increased on many articles, especially such as entered into competition with those manufactured here. The consul-general writes:

I am informed by leading business men that the principal objects in view in the new tariff are the protection of the manufacturing interests in Mexico, the increase of the revenue, and the accumulating of such a surplus from the duty collected as will forever guarantee the gold standard and make it more easy to maintain.

I am informed that while the new tariff appears to lend an inspiration to the manufacturing interests of the Republic, it has not materially decreased the importation of foreign manufactured goods, and that the demand for American and European goods of most kinds is steadily on the increase.

Vice-Consul Manuel Verhelst, of Puerto Cabello, Venezuela, reports that a decree has been promulgated by the President of the Republic, ordering the construction of a dock and dockyard at that port. The construction of the works will be under the direction of the general commander of the navy. The sum of $96,500 has been appropriated for the building of the dock and dockyard.

Consul-General Parsons, of Mexico City, reports 2,840 mining titles given by the Mexican Government in 1904–5 and suggests increased mining activity in the Republic.

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NEW VESSELS OF THE UNITED STATES.

The following new vessels of the United States, over 20 tons, have been officially numbered by the Bureau of Navigation, Department of Commerce and Labor, between September 1 and September 30, 1905:

Name.	Rig.	Gross tons.	Material.	Where built.	Home port.	Owner.
White Seal	Stern-wheel steamer	198	Wood	Fairbanks, Alaska	St. Michael, Alaska	G. P. Spoul.
Augusta	do	512	Steel	Augusta, Ga	Savannah, Ga	Southern Transport. Co.
Cigarette	Steam yacht	83	do	Boston, Mass	Boston, Mass	W. H. Ames.
Lillian H	Stern-wheel steamer	41	Wood	Gallipolis, Ohio	Wheeling, W. Va	John E. Mills.
Thomas A. Cromwell	Schooner	128	do	Essex, Mass	Boston, Mass	Master & Octon.
Frances Hyde	Screw steamer	789	do	Bath, Me	New York, N. Y	Benvenue Granite Co.
Robert W. Johnson	do	204	do	Noank, Conn	Perth Amboy, N. J	The Middlesex Transport. Co.
Columbia	Stern-wheel steamer	341	do	Wenatchee, Wash	Port Townsend, Wash	Columbia & Chelan Navigation Co.
J. Lloyd Hawkridge	Schooner	121	do	Milford, Del	New York, N. Y	Charles G. Payne.
Mabel W. Gouldman	Screw steamer	83	do	Pocomoke City, Md	Tappahannock, Va	Wheaton Package Co.
Sacajawea	do	59	do	Telida, Wash	Portland, Oreg	Smith & Davis.
Gambolier	Gas yacht	20	do	New York, N. Y	New York, N. Y	Augustus Smith.
Henry C. Frick	Screw steamer	6,490	Steel	West Bay City, Mich	Duluth, Minn	Pittsburg S. S. Co.
Louisa	Gasoline screw	182	Wood	Solomons, Md	Annapolis, Md	M. M. Davis & Sons.
Jean & Virginia	do	30	do	New York, N. Y	Norfolk, Va	P. D. Gwathney.
Leal	Screw steamer	20	do	Long Island City, N. Y	New York, N. Y	Williams-Whittelsey Co.
W. Harlock	do	28	do	Lyons, Iowa	Rock Island, Ill	Wm. Harlock, jr.
Delta	Stern-wheel steamer	293	do	St. Michael, Alaska	St. Michael, Alaska	Northern Navigation Co.
Virginia	Screw steamer	2,027	Steel	Wilmington, Del	Wilmington, Del	The Harlan & Hollingsworth Co.
Theoline	Schooner	981	Wood	Belfast, Me	Boston, Mass	F. B. McQuosten.
Mastodon	Screw steamer	96	Composite.	Greenpoint, N. Y	New York, N. Y	Boston Provision and Ship Supply Co.
Frank J. Hecker	do	4,978	Steel	St. Clair, Mich	Port Huron, Mich	The St. Clair Engineer Co. Works.
Chilo	Stern-wheel steamer	94	Wood	Point Pleasant, W. Va	Wheeling, W. Va	Cincinnati, Pomeroy & Charleston Packet Co.
Monocacy	Screw steamer	617	Steel	Sparrows Point, Md	Baltimore, Md	Maryland Steel Co.
Brooklyn	do	3,636	do	Belfast, Ireland	New York, N. Y	Lewis Luckenbach.
Ethel Ruth	Schooner	24	Wood	Solomons, Md	Tappahannock, Va	Wm. H. Marsh.
John Stanton	Screw steamer	6,129	Steel	Lorain, Ohio	Cleveland, Ohio	American Shipbuilding Co.
Holiday	Gasoline screw	26	Wood	Atlantic City, N. J	Sommers Point, N. J	Ferd. Stadler.
Ruth B. Cobb	Schooner	620	do	Rockland, Me	New York, N. Y	Cobb, Butler & Co.
Mizpah	Screw steamer	33	do	Olympia, Wash	Tacoma, Wash	John C. Ross.
Alert	Stern-wheel steamer	48	do	Delhi, Ohio	Cincinnati, Ohio	Moses Pickelheimer.

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THE ORIENT.

EMPIRE OF CHINA.

AN INTRICATE BANKING SYSTEM.

ANCIENT AND MODERN METHODS—INTRICACY OF THE SYSTEM—LEADING BANKING HOUSES.

During the month Consul George E. Anderson, of Amoy, contributed to Consular and Trade reports a number of interesting articles, all of which contained information that will be found valuable by our manufacturers and exporters. The first of these articles is on the banking system of China, in which Mr. Anderson explains the methods of doing business through the banks and points out the intricacies of the dual system. His report on taxation will be found interesting, and professional men will read with interest what the consul reports in regard to the practice of law, medicine, and dentistry. His reports follow:

It may fairly be said that there are two systems of banking in China, both of them very profitable. One is the foreign system, which is represented by banks of foreign origin, financing, and support. The other is the native bank system which has existed for centuries, and which does business to-day in much the same manner as did Chinese banks a thousand years ago. There is more or less connection between the two systems, but they are not closely identified. The native banks do a discount and loan business and have more or less to do with international exchange by native connections in San Francisco, New York, Manila, Singapore, the Straits Settlements, and several points in India. The foreign banks do an immense exchange business, carry large loan accounts, and have the usual banking connections in all parts of the world. Both systems depend much for their profits upon the intricate monetary system in China. The profits of both come very largely from exchange.

NECESSITY OF STUDYING CHINESE MONETARY SYSTEM.

It is impossible to secure a correct idea of the banking business in China without an appreciation of the monetary situation, which I have discussed heretofore in reports upon monetary reform and exchange. It may merely be said in this connection that by reason of the many varieties of money in circulation in China, because of the difficulties of transportation and slowness of readjustment in financial transactions, involving the shipment of silver from one part of the Empire to another, the exchange charges of banks act as a tax upon almost every business transaction in China. Practically all of the foreign banks in China charge their customers not to exceed 7 per cent on overdrafts. At the same time the lowest interest offered depositors for deposits by the

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year is 4 per cent, and in most places it is 5 per cent or higher. All the foreign banks pay not less than 2 per cent to depositors on their daily balances. On the other hand, drafts on the United States often cost 6, 7, and even 8 per cent of their face value for exchange.

INTRICACIES OF CHINESE BANKING.

The intricacies of the system by which exchange is charged must be experienced to be appreciated. The native banks follow much the same system, except that there is no limit to the rate of interest to be charged, and the result is that the rate is fixed by the necessities of the borrower, the nature of the security he offers. and the proximity of the time to the Chinese new year, when all debts in China are supposed to be settled, if in no other way than by making a new one. Ten per cent interest a month is not at all unusual with native banks, but the security is not always good and the losses from poor loans are large. Interest rates with the foreign banks are somewhat higher than they are in the United States or Europe to customers of corresponding merit, but are not unreasonable. When, however, foreign banks lend money to Chinese through their compradores there is not much more of a limit with them than there is with native banks. It is quite probable, however, that the compradore makes most of the additional profits. The compradore in banking, like the compradore in general business, is the go-between acting between the bank and the Chinese. His position is a very important one. As a rule he is a guarantor on all business he does for the bank, and his profits and privileges correspond with his responsibilities.

ORGANIZATION OF FOREIGN BANKS.

The foreign banks in China are generally organized abroad. The leading bank, the Hongkong and Shanghai Banking Corporation, which is the financial agent of the Chinese Government, is organized under the laws of Hongkong. The Russo-Chinese Bank has a Russian charter, the International Banking Corporation an American charter, the Charter Bank of India, Australia, and China an English charter, the Bank of Taiwan a special Imperial Japanese charter, Le Banque d'Indo-China a French charter, and so on. The Chinese banks have no more authority to do business than any other business house, but the Government taxes them upon their deposits, as a rule, the tax amounting to about 10 per cent of their capital stock; but from the nature of their business, which approaches that of pawnbroker, the tax is carried with comparative ease.

The native banks also have the advantage of cheap labor and cheap quarters compared with the foreign banks. Native help, of the sort employed in the native banks, can be had at from $5 to $15 gold per month, while the quarters of the best native banks often are squalid in appearance. The foreign banks have splendid buildings, some of the finest architecture in China being that of buildings used for banking purposes. The labor element in the cost of carrying on the business of foreign banks also is large. A large number of native clerks are employed by most of them; but there must be foreign superintendence of all this help, and this superintendence is done almost invariably by men trained in banking in their own country. Such labor costs not

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only as much as it does in the respective countries from which it comes, but costs enough in addition to make it worth while for the home banker to come to China. Most of these foreigners employed in banks in China come out under contract for a number of years and when their time is up they return home. Their contracts are liberal as a rule, both in salary and vacation periods with pay—vacations home being a necessity for foreigners in China. There is a remakably small amount of embezzlement and theft in the banking business of China when the lack of restraints is considered.

DIVIDENDS.

Dividends from banks in China, both native and foreign, are far greater than those of similar institutions in the United States, but the risks are greater. Assuming that so long as there is peace and a gradual development of modern civilization and modern business methods in China there will be no extraordinary dangers to banking interests, it by no means follows that there is no danger of trouble or that the possibility of a recurrence of the horrors of 1900 is not to be taken into consideration in a business like that of banking. This danger of trouble in China is always present. Aside from this danger there are many things which go to make banking precarious in a country which is at best unsettled in business, politics, and international relations. All these dangers count in the calculation surrounding the banking business in China. At the same time an institution earning 25 per cent per annum on its original capital can afford to run such risks.

IMPORTANT BANKING HOUSES.

In the smaller ports of China a number of the larger merchant houses do a quasi banking business. I believe, however, the following lists include the principal banking houses in China.

Russo-Chinese Bank, Russian charter; capital and surplus, 26,086,106 rubles. Branches and agencies: Andijan, Batoum, Blagowestchensk, Bodaibo, Bokhara, Busk, Calcutta, Chefoo, Dalny, Hailar, Hakodate, Hankow, Harbin, Hongkong, Irkutsk, Kalgan, Kachgar, Khabarovsk, Khokand, Kiachta, Kirin, Kobe, Kouldja, Krasnoiarsk, Kwantchendze, Liaoyang, Moscow, Moukden, Nagasaki, Newchwang, Nicolajefsk, Ouliasutac, Ourga, Paris, Peking, Port Arthur, Samarcand, San Francisco, Shanghai, Stretensk, Tachkent, Tchita, Thougeutchak, Tielin, Tientsin, Tsitsikar Verhneoudinsk, Verniy, Vladivostok, Yokohama, and Zeskaia Prisian.

Banque de L'Indo-Chine, French charter; capital and surplus, 38,888,457 francs. Agencies and branches: Saigon, Hongkong, Haifong, Shanghai, Hanoi, Hankeou, Tourane, Canton, Pnom-Penh, Bangkok, Noumea, and Pondichery.

Yokohama Specie Bank (Limited), Japanese charter, capital and surplus, 51,720,000 yen. Branches and agencies: Tokyo, Kobé, Nagasaki, Lyon, London, New York, San Francisco, Honolulu, Bombay, Hongkong, Tientsin, Peking, Niuchwang, etc.

Hongkong and Shanghai Banking Corporation, Hongkong (British) charter, capital and surplus, $28,000,000 Mexican. Branches and agencies: London, Amoy, Bangkok, Batavia, Bombay, Calcutta, Colombo, Fuchau, Hamburg, Hankau, Iloilo, Kobé, Lyon, Manila, Nagasaki.

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New York, Peking, Penang, Rangoon, Saigon, San Francisco, Singapore, Sourabaya, Tientsin, Yokohama.

Imperial Bank of China, Chinese charter, paid up capital, 2,500,000 Shanghai taels.

International Banking Corporation, American (New York) charter, capital and surplus, $6,500,000 gold. Branches: London, Washington, San Francisco, City of Mexico, Yokohama, Kobé, Shanghai, Bombay, Calcutta, Singapore, Hongkong, Canton, Manila, and Cebu.

Sino-Belgian Bank, Belgian charter, Shanghai.

Deutsch-Asiatische Bank, German charter, authorized capital, 7,500,000 Shanghai taels. Branches: Shanghai, Hongkong, Tientsin, Calcutta, Berlin, Tsintau, Hankau, Tsinanfu.

Nederlandsche Handel Maatschappij, paid up captital, 50,000,000 guilders. Branches: Singapore, Penang, Rangoon, Medan, Pleh-leh, Telok-Semawe, Padang, Palembang, Samarang, Cheribon, Tegal, Pekalongan, Tjilatjap, Sœrabaya, Pasoeroean, Bandjermassin, and Macassar.

Chartered Bank of India, Australia, and China, British charter, capital and reserve, £2,475,000.

Bank of Taiwan, limited, Japanese charter, capital and surplus, 7,500,000 yen. Branches and agencies: Fuchau, Hongkong, Keelung, Kobé, Nagasaki, Osaka, Shanghai, Tanan, Tamsui, Tokyo, and Yokohama.

TARIFF TAXATION.

THE LIKIN SYSTEM AND CUSTOM-HOUSE CHARGES.

In the following report Consul Anderson points out the evils that arise from the so-called "likin" tax, a tax somewhat similar to Europe's active taxes—that is, taxes raised at the gates of cities on goods coming in from the country or on goods going over the borders of one district into another. The report is as follows:

There is increasing reason to believe that many American manufacturers interested in Chinese trade do not understand the limitations under which only foreign trade in China can be conducted. It should be realized, in the first place, that foreigners can reside in China for trade and general purposes only in the open or "treaty" ports. Residence and trade by foreigners in other portions of the Empire are not allowed by the Chinese Government. There seems to be a hazy idea in the United States that these limitations, as to residence and trade, are no longer in force and that they can be avoided. As a matter of fact it is doubtful if there has been a time since the troubles of 1900 when these rules as to trade and residence were so carefully and persistently enforced. There has been a gradual lengthening of the list of open ports, and the right of entrance and trade has slowly been extended in this manner. But the Government at Peking, and especially the local governments of the provinces and prefectures, still enforce exclusion where possible. One of the chief reasons why this is the case has to do with the relation of the open-port system to the inland or "*likin*" tax system of the Empire, a system that should be thoroughly understood by all men doing business with or in China.

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THE ORIGINAL OPEN PORTS.

Originally the open ports were five in number—Amoy, Canton, Ningpo, Shanghai, and Foochow. From time to time, by operation of treaties and otherwise, but generally for the purpose of pledging the customs duties therein collected in behalf of foreign loans, other ports have been opened until the list includes thirty-six ports, as follows:

Kiukiang.	Chungking.	Foochow.	Kiachow.
Wuhu.	Chinkiang.	Samshui.	Yochow.
Nankin.	Wenchow.	Lappa.	Changsha.
Ningpo.	Kongmoon.	Chingwantao.	Hankow.
Canton.	Kowloon.	Chefoo.	Hangchow.
Kiungchow.	Szemas.	Shasi.	Swatow.
Mengtsz.	Tientsin.	Soochow.	Pakhoi.
Tengyueh.	Ichang.	Amoy.	Lungchow.
Niuchwang.	Shanghai.	Wuchow.	Santuao.

Some of the last named are only partially opened to trade, and many of those included in the list are small places connected with larger ports. A few other ports have been brought within measurable distance of foreign trade by special regulations and arrangements, but some of the largest and most important cities of the Empire are not open to foreigners at all. Peking, the capital of the Empire and its second city, is a closed port. For instance, in this district also, the two largest cities—Changchew and Chinchou, cities of three-quarters to a million people each—are closed to foreign trade, and foreign goods can be entered only in the open ports above named by the payment of the imperial maritime customs duties of about 5 per cent ad valorem. Except for missionary purposes, foreigners can reside in no other portions of China.

NO RADICAL CHANGES PROBABLE.

It need not be expected that these regulations closing the Empire generally to trade will be radically modified for some time, although from time to time in the immediate future it may reasonably be expected that there will be more ports opened up to trade, just as there have been in the immediate past. The opening of ports to trade, however, is so intimately connected with the customs tariff and taxation system of China that until there is a complete change in the methods of taxation there can not be and will not be any complete change in the matter of exclusion from ports other than those announced as opened to foreign trade.

This matter of taxation not only has a direct bearing upon the opening of ports and its general relation to the trade of the Empire, but it also has a direct bearing upon foreign trade in its effect upon the distribution of foreign goods in the interior of the Empire after they have been entered at an open port and have paid the customs tariffs agreed upon in the commercial treaties with the several powers. This, indeed, is the most important phase of the likin administration as affecting foreigners. While China is not a free-trade country, the tariff charged upon imports in the Empire is small enough to have comparatively little influence upon trade where the taxation stops at the seaport tariff. The Empire presents conditions in this line which are hard to duplicate in any other country. Speaking generally, a

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duty of 5 per cent ad valorem is charged upon all imports. Some special articles, like opium and similar products, pay a higher tax. Taxation, however, does not stop here. This tax merely admits the goods to an open port. If they are shipped inland additional taxes are charged, mostly under native control and generally termed "likin." There is a tax on exports and on the trade in commodities between the different ports of China. Some of this goes through the foreign-manned customs service, known as the imperial maritime customs, while some goes through the native customs service, as above noted, known otherwise as the likin customs service. The imperial maritime customs service charges fixed rates of taxation as decreed by law and arranged by treaty. The funds derived from this service go theoretically to the Chinese Government, but practically to the payment of China's foreign debts. The funds raised from the native customs service as a rule support the Chinese governmental establishment, although in the case of a number of likin districts the funds are pledged for certain foreign loans. There is no uniformity in the charges made by the likin stations. As a rule the taxes imposed are as high as the traffic will bear.

COMPETITION IN TAXATION.

Where goods may be sent by either the likin or the imperial maritime customs route, as is often the case, there is the peculiar situation of competition in taxation, and often the Chinese officials will fix the likin charges lower than the legal importation charge, so that goods will go by their route rather than by the customs route. It is easy to see how it is possible for great abuses to creep into such a tax administration. Under the Chinese system of government the unit of taxation and administration is the province, which is further divided and subdivided into prefectures and magistrates' districts. The viceroy of one or more provinces, or the governor of a province, is responsible to the central government for certain sums for governmental or other purposes, to be raised as best they can be raised. Naturally, with no limitation from the central government, and pressed by orders for certain sums of money, often given with time limitations which make the raising of the sum by ordinary means seemingly impossible, the provincial governments find a good many ways of taxing the people and producing these funds. In Fukien province, for instance, the range of taxation covers all the middle ground between a land tax and an import and export duty to the profits of a provincial lottery and a tax on the manufacture of bricks. A camphor monopoly is another form of raising money, and at the present time, when a foreign business house needs land for its business purposes on which the Chinese Government has any claim, directly or indirectly, that foreigner is likely to realize before the land is obtained that there are other means of taxation than those generally employed by governments in western countries. In short, there is no limit to likin taxation. One who has not investigated this tax system of China, or who has not had personal experience with it, can not realize its extent or its ramifications. The amount of money raised for governmental and other purposes in this manner is unknown, owing to the lax method of collecting, accounting, and expending, but it certainly is very large—far larger than China has credit for raising from its people.

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EFFECT OF LIKIN ON FOREIGN TRADE.

Foreign trade is affected directly by this likin system. Under the commercial treaties between China and most of the powers foreign goods can be sent to an open port, where the 5 per cent duty is charged, and then can be sent to the interior under what is known as a transit pass upon the payment of 2½ per cent ad valorem in addition thereto, the latter tax under the treaties being supposed to take the place of all likin exactions upon the goods covered by the pass. As a matter of fact and in actual practice the transit-pass system is disregarded in many cases and foreign goods are kept out of the interior or are subjected to ruinous taxation under likin charges. Where the transit pass is respected there is often some local regulation whereby goods under such a pass can only be sent to some particular point in a district. When the goods are removed from this particular point, which may be some out-of-the-way likin station, to be sold to consumers elsewhere, additional taxes are imposed until the cost of the goods reaches a prohibitive selling point.

The present tax system of China is certainly operating in hindrance of trade, both foreign and native. The hindrance comes not in the initial stages of taxation or in the theory of the tax as applied to foreign goods; but like a good many other things in China theory and practice differ, and the practical operation of this system of taxation is far from beneficent. The situation as respects the transit-pass system is well described in a protest British merchants in China recently made with respect to the enforcement of the provisions of the British commercial treaty known as the Mackay treaty. In this protest it was declared that taxation in China at the present time is worse than it has ever been before.

THE PROFESSIONS.

THE ORIENT NOT INVITING FOR YOUNG MEN.

In response to numerous inquiries from the United States regarding the Orient as an inviting field for young men who have entered the professions of law, medicine, and dentistry, Consul Anderson writes at considerable length explaining the methods and practice that obtain in China. The consul does not offer encouragement for young men who contemplate going to China to engage in a profession. He says:

While there is always more or less disposition on the part of some young men to push into untried portions of the world, not only for travel and experience, but also for a livelihood, the number of inquiries received by foreigners in China from people in the United States and elsewhere, as to opportunities to engage in business, and even to practice the professions here, seems to indicate that there is rather a well-defined movement toward the Far East among some classes. In countries like Great Britain, Germany, France, and others, with colonial connections, this movement has existed for many years, and is a recognized course for a certain portion of the nation's population. But such a movement in the United States is new and notable, and probably indicates a turn of national development and national life which merits attention.

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EARNINGS NOT LARGE.

Business opportunities in the Far East are comparatively well understood in their attractive as well as in their unattractive phases. Opportunities for the practice of the professions, however, are comparatively unknown. In some lines of professional work in the Far East there are well-defined limits of prosperity and adversity, but in others the result of Anglo-Saxon effort is yet to be shown. One reason for a movement among young men to come to the Far East to practice professions is in reports which have come to their ears of exceptional opportunities enjoyed by other men, of the good fortune of some men in building up large business connections, and of the earning of large fees by men in practice here.

That large fees have been earned both in medicine, law, dentistry, and otherwise is to be freely admitted. It does not follow, however, that all practitioners here can earn fees of this sort, or that the opportunity will come here any oftener than it does in the United States. If it were true, which is probably not the case, that the average earnings of professional men in any line here are greater than they are in the United States, it is to be considered that increased cost of living, increased expenses for books, medicines, and supplies, and the absence of other things which go to make life worth living, may combine to render practice here less profitable and satisfactory in the long run than practice in Europe or America. Nor has the young professional man here any better chance of work or advancement than he has at home. Generally speaking, and considering matters in all their lights, I do not believe that young men in America have anything to gain by attempting to build up a professional practice in China.

There are three professions which are attracting the attention and employing the abilities of foreigners in China at the present time—those of the law, medicine, and its kindred profession, dentistry. The Chinese people have had all three of these professions for ages, but their practice has been far different from the practice in other lands, and it will be some time before Chinese competition in any of them will be felt except through foreign training and as a result of the efforts of foreigners. Chinese medical men have not been in very good standing among their own people for many years. Chinese dentists have done more than their fellows in the medical line, and all things considered Chinese dentistry, while it can not compare with modern dentistry as practiced in America and Europe, especially in the former, is far above what might have been expected when other sciences in China are considered.

PRACTICE OF THE LAW.

With regard to the law, Consul Anderson says the practice in China is entirely different from that in the United States and Europe. There is some opportunity for outside lawyers in the consular courts, where administration is based upon the laws and procedure of the country of each consulate, and which affects foreigners in their own relations and disputes as well as disputes between Chinese citizens and foreigners. There are no requirements for admission to the bar in China for the reason that there is no bar. Each consular court has its rules for admission, and when an attorney is allowed to practice in

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one court it is taken as an international discrimination if any other consular court does not extend like courtesy. He says:

There should be no false idea that the attorneys practicing law in China are making immense fortunes, or that there is much of an opening for other lawyers in this field. Doubtless there will be an increase in the law business in China as foreign interests increase, but it is very doubtful indeed if this increase will keep ahead of the natural increase tn the number of practicing attorneys. There is a growing demand, ioo, for attorneys of experience; and loose practices which have long obtained will soon be ended by the sheer force of the demands of the business communities concerned for better service. Some attorneys practicing in Shanghai are making large incomes. The younger and less experienced are making little, if any, money, and most of them, like many at home, are glad to give their uncertain small practice for a position bringing in a thousand dollars gold a year, especially if the position be in a way related to their profession.

There is but a limited field for the law in China at best, and most of the field is already occupied by men who are well established, whose business is protected by the intense conservatism of the dominant British interests, and who will probably hold their position by reason of such conservatism whether they are entitled to do so on the score of merit or not.

It can safely be said that there is little to encourage a young man entering upon the practice of law in a Chinese port. Unless he is able to buy his way into an old-established firm his struggle for business is fully as keen as it would have been at home and he has neither the field to work in or the restrictions to guide him and protect him from mistakes as he has at home. If he is honest and conscientious he is likely to find that he fails in competition for business because there are competitors who are not honest and conscientious.

COMMUNITY AND MISSIONARY PHYSICIANS.

With regard to medicine his report states that its practice is confined to the work of physicians not connected with a missionary society, generally called "community doctors," and to those who are connected with missionary societies. There is considerable difference in the nature of the practice of these two classes of physicians although physicians of each class may be of the best standing professionally. Missionary physicians, as a rule, are under contract with their societies either not to undertake any practice outside of their missionary work or, more generally, to turn over to their societies all fees derived from practice of all kinds within or without their missionary duties.

The imperial maritime customs service has physicians connected with the service staff of each port, whose duties are to look after the health of members of the staff, often a considerable matter with a large staff in an unhealthy climate and amid insanitary surroundings, and to attend to the medical wants and the inspection of vessels visiting the ports. Sometimes these port physicians are missionary physicians as well.

MARCH OF FOREIGN IDEAS.

The number of native practitioners with foreign training is rapidly increasing. Practically every missionary physician in China has a medical school for natives. The result is that in due time the leaven of foreign medical knowledge will have lightened the whole lump of

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Chinese medical ignorance, and it is probable that long before China is ready to accept foreign ideas generally it will be able to care for itself in a medical way. At present the amount of unrelieved suffering which could be relieved under proper medical care is appalling. It is one of the first things noted by foreigners coming to China and it is one of the last things they forget. It will be some time before China can educate enough of its own people to take care of this vast mass of humanity, but the work is being accomplished, and foreign medicine is favorably received by the people as a whole.

The Chinese are favorable to the patent medicine business if it can be brought within their reach. They naturally take to such a method of treating diseases, and remedies advertised, as they are in the United States and Europe, would have a big sale here provided the prices charged for them would be within the reach of the middle class. The lower class is generally too poor to buy any remedy or have the services of any physician which are not given to them. They suffer simply because it is cheaper or otherwise better than to be cured and starve.

LIMITED OPPORTUNITIES FOR DENTISTS.

With regard to dentistry Consul Anderson writes:

All persons familiar with the situation seem to agree that, owing to a number of reasons, opportunities for the successful practice of dentistry are extremely limited. "In the first place," says a young American who has had actual experience under reasonably favorable conditions, "the ethical practitioner, unless willing to buy an established practice or work as an assistant either for salary or on commission to the successful practitioner, will find it impossible to pay expenses in a shorter time than two years."

The mass of Chinese are unable to pay fees which would justify his working among them, and the moneyed individual ordinarily goes to the long-established practitioner. The British people, who largely preponderate among foreigners in the East, are averse to changes. They go to a certain dentist or dentists because they have been there before or because their fathers went to that dentist or his predecessor before them. Of the other nationalities, the German is prone to patronize his own countryman, if possible, which is but natural. If after probation the new practitioner becomes well established, he will find that his office and living expenses will consume three-fourths of his gross income. The practitioner above quoted says:

"From personal observation, I should say there is not a practitioner in China or Japan who can add to his net bank balance from dentistry alone the sum of $1,500 gold in one year. As his practice increases his social obligations and consequently his expenses increase in proportion."

PRESENCE OF JAPANESE.

Foreign-trained Japanese are becoming a very important factor in the professional situation in China, and in dentistry their work particularly is being felt by foreign practitioners. They are often well trained—most of them either directly or indirectly American trained—and they work for fees which a foreign dentist can not afford to accept. They also have the advantage in general practice of understanding the Chinese and of readily acquiring enough of the language to materially aid them in their work.

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CHINESE PRACTICE DISAPPEARING.

China has yet to recognize the part the professions have to play in its national life. The ancient practice of medicine and dentistry never was very favorably regarded, although the necessity of their existence was understood. Chinese practice, as such, is rapidly disappearing, and its devotees are looked upon by intelligent Chinese as mere quacks. The Chinese are taking to medicine and dentistry, and even to the law, not because they regard them favorably, perhaps, but from sheer necessity. If the physician or dentist can not effect a cure in every instance he is immediately placed upon the defensive. With the lawyer it is a case of consulting him only in desperate straits. The Chinese have no appreciation of professionalism, as such; no appreciation of the part the professions take in the development of national life; nothing more, at best, than an appreciation of them as a temporary help in time of trouble.

TO SECURE TRADE.

LOW PRICES AND GOOD QUALITY ESSENTIAL FACTORS.

Consul Anderson says the best way to secure and to maintain trade in China is by selling goods as cheaply as possible, always offering the best quality possible for the money. He points out some mistakes made in the past. The report follows:

It ought not to be necessary to impress upon American business men that it pays to sell goods of full value in the Far East, and it would be unfair to the American business men to say that they have greatly erred in not doing so. It is a fact, nevertheless, that one of the strongest obstacles to be overcome in stimulating foreign trade in China is the fact that Chinese in the past have bought cheap foreign goods, have tried them, and have found them wanting. They have found, for instance, that unless they are careful they will buy cheap foreign cottons "weighted" with clay, which are not as durable as cottons of native make which they can buy for the same money. What is true of cottons is true of many other things. They experiment with cheap foreign goods, and find them wanting. With their prejudices against foreign goods already established, they naturally refuse to purchase foreign goods in the future.

MARKETS MUST BE STUDIED.

Goods of all classes to be sold in China must be cheap. The people can not buy them unless they are cheap; but this cheapness should not be obtained at too great sacrifice of quality. This is especially true of goods like cotton goods, of which the Chinese themselves have been manufacturers for ages. It can fairly be said that the United States has erred less in this respect than almost any other nation trading in the Far East. American manufacturers have leaned too far the other way. They have refused to manufacture goods suitable for the Chinese market. They have been accustomed to send to China for sale merely that surplus of goods which they had manufactured for American or European consumption, but which they had been unable to sell in the market for which they had been intended. On the other

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hand, the competitors of the United States have been studying the markets of China, and have manufactured goods for the Chinese markets. They have secured large trade, but have cut qualities in goods which the Chinese require, and are losing that trade just as rapidly as other nations manufacture and sell better goods for the same money.

IT DOES NOT PAY TO SEND SHODDY GOODS.

It certainly will not pay to send shoddy goods to China at any price. It might bring temporary trade, but the policy will react strongly and more will be lost than has ever been gained. It is unfortunate that the shoddy policy has been followed by so many foreigners dealing in China, for all foreigners are paying for it at the present time, and are likely to pay for it to even a greater extent in the future. While China may not be modern in all its ways, it is safe to say that the Chinese know good goods as well as anybody. This is true not only of things to which they are accustomed, but also of things to which they are not accustomed. It is a mistake, for instance, to send poor canned fruits to China. A consumer buys such goods and, foreigner or Chinese, refuses to buy again. China is not a dumping ground for the poor goods of any nation.

The wise American exporter will be content with smaller profits and slower trade in China, based upon goods of standard grades and full value. Nothing fancy should be sent for ordinary consumption. Cotton goods, for instance, should be stripped of everything to add to their cost but the actual quality. But that quality they must have.

THE POMELO.

MAY BE PROFITABLY GROWN IN AMERICA.

The pomelo or Chinese grape fruit, a member of the citrus family, Consul Anderson thinks may be profitably cultivated in the United States. Horticulturists and all parties interested in fruits as foods or delicacies will find the report well worth reading. It follows:

In a report from Hangchow on the fruits of China I called attention to the fact that, alone of all Chinese fruits, the pomelo could, in my opinion, be introduced with profit into the United States upon a more extensive scale than it has been. The number of inquiries received both from individuals and from Government experiment stations as a result of that report, shows an extraordinary interest in the subject, and the requests for seeds, which can not be met until the pomelos come in next autumn, promise that something definite will be done about the matter in the United States and Cuba. I understand that the fruit is actually grown in several portions of the United States by a few persons who have introduced it from China themselves, but it is not grown commercially, or at least not upon any great scale. Foreigners agree in declaring that all things considered the pomelo is the finest fruit in the Far East. In my opinion it is one of the finest fruits grown, and I would be very glad to see it produced commercially in the United States. It combines the good points of the orange with the good points of the grape fruit. It is more easily handled than the orange, and has not the peculiar bitter quality of the

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grape fruit. In general description it may popularly be known as a cross between the orange and the grape fruit, but it is probable that, if not the original citrus fruit, it is older than either the orange or the grape fruit. Apparently it has been cultivated here in China for at least two thousand years.

CLIMATE AND SOIL REQUIRED.

It requires ordinarily only three years to grow the tree from seed to bearing period, although, of course, the first year's crop will be very small, and, commercially, it will pay to hold back the bearing period at least a year. Its bearing period with ordinary Chinese care probably ranges from twenty to twenty-five years. The tree apparently grows upon any kind of ground, good soil, of course, producing more and better fruit than poor soil; but the habits of the tree require no particular soil or soil conditions.

The best pomelos are grown farther south in the lower portions of Fukien Province and the upper portion of Kwangtung Province. This corresponds in latitude with Key West and in winter climate with central and southern Florida, although probably the summers are somewhat warmer. It has many of the characteristics of central and southern Florida and lower coast Texas, but its soil will hardly average as good for citrus fruits as that of the American States mentioned. The best pomelos in the world are said to come from a little valley near Chang Chew, a large Chinese city in the interior from Amoy which has not yet been opened to foreign trade, the village in this valley named Po Nan being the center of the trade in fine pomelos. The pomelos grown there are of exceptionally fine flavor and size and of splendid and showy appearance. They bring high prices. So famous are the pomelos grown there that each year a special tribute of Po Nan pomelos are sent to the Emperor at Peking. The summers in this valley are hot and rather damp. The winters show considerable frost but practically no freezing. The temperature will often go as low as 28° F. and has been known to go as low as 25°, although damage was done at that time. The summers are of higher temperature and the winters of lower temperature than Amoy, on an island on the seacoast and of the same latitude. I believe the extremes may fairly be said to be practically the same as those of many valleys in central California.

The pomelo is grown far in the interior of China, having been reported as common by travelers in even the drier portions of Szchuan Province. I believe that it is even more adaptable to climatic differences than the orange, but it would probably do better in a warm and comparatively damp climate like Florida than in the dry atmosphere of California.

BEARING CAPACITY OF TREES.

The Chinese say that a good-sized tree will ordinarily produce from 600 to 700 pomeloes. I have no doubt but that many trees will produce more. When it is considered that many pomeloes will run as large as 7 or 8 inches in diameter and even larger, it will be appreciated that such a tree is bearing a load. The fruit is more oval than round. Its color and appearance are those of the grape fruit. The structure and covering also are practically those of the grape fruit, except that

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the skin and pith padding may average somewhat thicker, and the small globules of juice and fiber or "meat" are more perfectly separated. Each section of the fruit contains a large number of seeds, but the seeds are close together on the inner edge of the section of the fruit and are easily separated from the edible portion without breaking into the juice cells. The Chinese pick their pomeloes, as they do all their fruit, too green to get the best results, and often the quality of fruit is poor simply because it has not been allowed to properly ripen. This premature gathering of fruit probably also interferes with the maintenance of the highest quality of their seedling trees. Many of the producers practice grafting from trees of unusual merit, but the general rule is to raise trees from the seeds. Early picking also prevents the fruit from keeping as long as it otherwise would, but in spite of green picking the fruit will keep for months. We have had pomeloes here in March from a crop which ripen in October and November. The Chinese have no particular means of caring for the crop. The pomeloes are handled in bags and receive little care. Their keeping qualities naturally could be greatly increased by more careful handling. As it is they are shipped in bags all over China and Japan and to the East Indies, and, in spite of rough usage and more or less bruising, they keep indefinitely, apparently lasting until the demand for them has exhausted the supply. I believe that with modern horticulture and modern methods of caring for and shipping the fruit the pomelo would become one of the most popular fruits in the United States.

STUDENTS IN JAPAN.

SCHEME TO EDUCATE CHINESE YOUNG MEN.

In a previous report Consul Anderson made reference to a movement that appears to have been deliberately started for the education of Chinese young men in Japan. There are indications that the movement is becoming popular with the upper classes of China, as a large number of young men have been sent to Japan to pursue studies that will be valuable in connection with industrial and commercial development of the Chinese Empire. In view of the general belief that Japan is to play an important part in the development of China, this movement for the education of Chinese youths in Japan is especially significant. Mr. Anderson writes:

In previous reports to the Department I have referred to the strongly defined movement of Chinese students toward Japan and the direct, tangible, and increasing influence this movement is having upon political, commercial, and social affairs in China. The Japan Mail, in discussing this matter, says:

"Chinese students continue to reach Japan in ever increasing numbers. The Jiji Shimpo says that scarcely a steamer brings less than 100, and 300 or 400 are always waiting at Shanghai for an opportunity to come. Looking back to the beginning of this movement, the first entry in the record shows that two students were sent from Chekiang by the Chinese Government in April, 1897. These were the pioneers. Now, in the eighth year of education, they are studying at the engi-

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neering college of the Imperial University. Thereafter the arrivals became frequent, some students coming at their own charges, others at the charges of the Government, and it appears that, among all the eighteen provinces of the middle kingdom, Kansu is the only one which has not hitherto contributed to the total. Dividing the students according to localities the following table is obtained:

Chili	172	Honan	12
Shensi	3	Hunan	363
Shantung	60	Kiangsu	406
Hupeh	400	Anhui	84
Chekiang	191	Fukien	76
Kiangsi	52	Szchuen	321
Kwangsi	26	Kweichou	38
Kwangtung	175	Manchuria	80
Yunnan	126		
Shansi	56	Total	2,641

"There are three elements of students—those sent at government expense, those sent at public expense, and those who defray their own expenses. 'Public expense' means simply that the charges are defrayed locally. For example, if a student, having graduated with distinction from a provincial college, desires to proceed to Japan for further education, but is too poor to meet the outlay himself, then the faculty of the college, if they consider him worthy of such aid, may arrange to assist him out of the local fund."

SIGNIFICANCE OF THE MOVEMENT.

What this movement to Japan for education means to general foreign interests in China remains to be seen. Most of the students thus going to Japan seem to learn just enough of foreign ways to become imbued with extraordinary ideas as to China's power of lifting herself out of her present position by her own exertions. There is no question but that the general sentiment in China at the present time against granting railroad concessions to foreigners is due very largely to the influence of these Chinese students in Japan. They reason that Japan built its own railroads and that China can do the same. The mere matter of finance is a secondary and inconsiderable matter.

The unfavorable feature of this educational movement to European and American interests is in the fact that these students, who will to a certain extent be the leaders in the movement for western education and western things in China in the near future, will have become familiar with Japanese things, and even where there would be a disposition to give all nations a chance, which disposition is by no means to be conceded, there would be a general tendency to introduce Japanese improvements to Chinese institutions as being those with which the progressive element is most familiar. The result is that if there is to be a railroad constructed it will be in Japanese style and with Japanese materials, although a Japanese style of railway will not be suitable for China. If there is to be a factory started, it will be along Japanese lines. Machines to be introduced will be Japanese machines. In short, Japan will gain an ascendency which its economic and other position will not justify. And China itself will probably be held back somewhat by the very movement which is designed to aid its progress.

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EXPORT OF BULBS.

LARGE INCREASE IN EXPORTS INSTITUTED.

Consul Andersen thinks the exports of Easter lilies or narcissus bulbs from China this year will break all records, and that a very considerable trade could be built up between China and the United States. He says:

The indications are that the record of shipments of narcissus or "sacred Chinese lily" bulbs for the United States will be exceeded this year. Fifty tons went out of Amoy in one vessel bound for the United States last week, and the next steamer for the Pacific coast is to take a similar shipment. The prospects are that there will be at least $35,000 worth of these bulbs shipped to the United States this year, exceeding the ordinary record by perhaps $5,000. Practically all of the narcissus bulbs exported from China go from Amoy, and at least three-fourths of these go to the United States.

The bulbs are raised in the Chang Chow district, about 30 miles inland from Amoy. The flowers are popular among the Chinese, having more or less of a religious significance, although nothing like the significance commonly believed in the United States. The extent to which they have come to be sold in the United States can best be realized when the volume of exports from the producing district is realized. In 1902 1,600,000 bulbs were exported; in 1903, 2,348,000; in 1904, 2,030,716, valued at $35,627. The exports this year will probably reach $43,000.

A considerable trade in Easter lily and calla lily bulbs might be built up between Amoy and the United States. The bulbs can be produced here at a minimum price. On the hills hereabouts, especially up country near where the narcissus bulbs are produced, the lilies grow wild. Sometimes an entire hillside will be covered with them. The climate seems to be peculiarly adapted to their growth, and in addition to this the cheapness of Chinese labor affords other advantages. The Chinese use calla and Easter lily bulbs for medicinal purposes.

SALE OF ALKALIES.

THE TRADE MONOPOLIZED BY AN ENGLISH FIRM.

Special Agent Burrill writing from Shanghai furnishes an interesting report on the sale and use of alkalies in China. He says the entire business is practically in the hands of an English firm, which has enjoyed the monopoly since 1901, and which will continue for some time to come. The facts and figures furnished by Special Agent Burrill will prove interesting to parties engaged in the manufacture of the commodities referred to. His letter follows:

Brunner, Mond & Co. (Limited), of Northwich, England, have since January, 1901, controlled absolutely the sale of alkalis in China. At that time this firm established a branch in Shanghai, and has run the Chinese product out of the market. By a business agreement among the English manufacturers of this material, Brunner, Mond & Co.

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are entitled for a period of years to sole representation in the Chinese market, and they will not be disturbed in that monopoly until the time expires by limitation, when, it is assumed, English competition will make its appearance. The products sold here and consumed almost exclusively by the Chinese are:

1. Ninety-eight per cent soda ash (carbonate of soda).
2. Caustic soda (three grades), 97 to 98, 90 to 92, and 76 to 78 per cent. Also a small demand for 100-weight drums.
3. Bicarbonate of soda (two grades), refined and mineral water.
4. Soda crystals.
5. Concentrated crystal soda (sesqui carbonate of soda).
6. Chloride of lime.
7. Sulphate of ammonia (artificial manure).

There is also a limited call for muriate of ammonia and for voltoids (tablets used as substitutes for sal ammoniac in electric batteries).

The selling prices laid down in Shanghai, including freight, insurance, customs duty, and landing charges, put up in weights or multiples of weights familiar to the Chinese and consequently attractive to the native purchaser, are as follows, in Shanghai taels:

[1 picul = 133⅓ pounds.]

	Per picul.
Soda ash:	
1-picul cask	3.71
2-picul cask	3.65
3-picul cask	3.48
4-picul cask	3.42
9-picul cask	3.28
1-picul bag	3.55
2-picul bag	3.42
Caustic soda:	
97 to 98 per cent, 1-picul drum	6.52
97 to 98 per cent, 5-picul drum	5.90
97 to 98 per cent, 650-pound drum	5.90
90 to 92 per cent, 1-picul drum	6.17
90 to 92 per cent, 5-picul drum	5.54
76 to 78 per cent, 1-picul drum	5.69
76 to 78 per cent, 5-picul drum	5.06
76 to 78 per cent, 100-weight drum	5.90
Bicarbonate of soda:	
Refined, 1-picul keg	4.30
Refined, 2-picul keg	4.17
Mineral water:	
1-picul keg	3.60
2-picul keg	3.47
Soda crystals, 2-picul casks	2.69
Concentrated crystal soda:	
1-picul cask	3.75
2-picul cask	3.50
100-weight cask	3.75
Chloride of lime:	
100-pound cases (per case)	5.50
336-pound iron drums	(a)
Sulphate of ammonia, 2-picul bags	6.25

PRICES AND SPECIAL TAXES.

The rates of exchange fluctuate daily, so it is impossible accurately to estimate the equivalent of a Shanghai tael in American money until the correct rate is known. The rate of exchange varies between 57 and 65 cents United States to the Shanghai tael, and for purposes of illustration an average of 61 cents may be taken. The selling price of 1-picul casks of soda ash (quoted above) is Shanghai taels 3.71 per picul ($3.71 \times 0.61 = \$2.2631$, its price in American money). Arrangements have been made by which the Chinese Government collects a special tax on alkalies in lieu of the customary 5 per cent duty. This tax is collected, however, in haikwan taels and 1 haikwan tael is equivalent to 1.114 Shanghai taels. The value of the haikwan tael in American, English, German, or the money of any nation exporting to China is fixed arbitrarily every month and remains at that figure for the

[a] No quotation.

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month, despite any variations in the rate of exchange which may occur during that period. For the month of August, at exchange 64½ gold cents to 1 Shanghai tael, 1 gold dollar equals haikwan taels 1.39. The special customs duty follows (haikwan taels):

	Per picul.		Per picul.
Soda ash	0.15	Concentrated crystal soda	0.14
Bicarbonate of soda	.15	Chloride of lime	.30
Caustic soda	.225	Sulphate of ammonia (per cent ad valorem)	.5
Soda crystals	.12		

CHARACTER OF PACKAGES.

The casks in which the product is packed are made of wood and shaped like a bulging barrel encircled by barrel hoops. A circular paper cover is used to fit in the head of the casks. It bears the name of the company, the trade-mark, and the name of the product in English and Chinese. The kegs are also made of wood with iron hoops and filled in with paper in like manner. The drums for caustic soda are made of iron, painted, and have iron heads on which is fitted an iron label. The cases are simply zink-lined boxes. The drums for the chloride of lime are made of iron, but have wooden heads. The bags are made of gunny, and two, one outside the other, are used for packing each parcel. They are fitted with "lugs" or wads of the sacking tied at each corner to facilitate handling.

USES TO WHICH PUT.

Soda ash is used for the manufacture of glass and paper. It is also extensively used in the bleaching of cotton goods and by bakers in making cheap confectionery and vermicelli. It is occasionally used for washing purposes, but not to any extent because of its price.

Bicarbonate of soda (refined) is used for the better grade of cakes and confectioneries.

Bicarbonate of soda (mineral) is used to produce carbonic-acid gas in waters.

Caustic soda is used in the manufacture of paper and soap.

Soda crystals in extensive use for washing purposes.

Concentrated crystal soda is used in the process for softening silk.

Chloride of lime for bleaching, the manufacture of paper, and as a disinfectant.

Sulphate of ammonia for fertilizing. The Chinese farmers are now utilizing this product extensively, and a steadily increasing demand is expected.

Caustic soda and chloride of lime have been imported from Japan, but in limited quantities. The price is about the same as that quoted above, but the quality is poorer, and consequently the English monopoly has no fear of its competing successfully in this market.

VALUE OF THE MONOPOLY.

The business of Brunner, Mond & Co., starting from nothing, has grown to large proportions. Their sales have reached 1,500 tons of 2,240 pounds a month of all products, and rarely fall below 500 tons of 2,240 pounds a month, at an average price of approximately $50 a ton.

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In order successfully to compete with this firm, it would be essential to build a warehouse on the water front at a cost of $20,000 in round numbers to carry the stock required for current business. For this amount a three-story building could be erected and the two upper stories could be leased at a good annual rental. Such a warehouse would save storage charges by the wharf company, a considerable item in Shanghai. There are practically no storage facilities here except those owned by Jardine, Matheson & Co., an English concern, and the China Merchants Steam Navigation Company, a Chinese company.

Cargoes arriving at this port may remain in a temporary warehouse built of corrugated iron for ten days free of charge. A monthly charge is then made, and if the cargo remains one day over the ten days permitted for handling and delivery the consignee is compelled to pay a full month's storage charge. For illustration, on a 9-picul cask 64 cents gold a month is charged for storage, and other packages are assessed proportionately. It would also be essential for a competing firm to possess a capital sufficient to withstand a cut in prices, for Brunner, Mond & Co. would vigorously resent an invasion of their monopoly, and would employ every means calculated to discourage a competitor.

A PROMISING FIELD.

Payments are made by the Chinese buyer in ten-day native bank orders against the delivery of the goods and are regarded as good as gold. The field is open to a live up-to-date competition and looks promising. An extensive annual increase in the demand for these products is confidently predicted, and there is abundant reason why the American manufacturer should cultivate this territory and obtain a commercial foothold before the existing agreement expires by limitation and English manufacturers begin to flood the market.

FOREIGN COMMERCE.

According to Export, a leading commercial paper, China's imports, expressed in haikwan taels, one of which equals 73.2 cents, advanced from 171,695,715 in 1895 to 344,060,608 in 1904; exports from 143,293,211 in 1895 to 583,547,291 in 1904. The customs receipts on goods entering by sea advanced from 21,380,000 taels to 31,490,000 taels.

The following table gives the share of the countries in China's imports, expressed in haikwan taels:

	1897.	1904.		1897.	1904.
Great Britain	52,960,816	72,490,918	Russia	19,852,888	9,513,738
Hongkong	150,528,109	227,943,027	Korea	1,384,574	2,270,015
India	21,114,114	34,606,493	Japan	39,191,022	88,150,914
Singapore	4,713,905	7,729,070	Macao	9,409,192	7,958,334
British America	6,803,374	2,693,735	Indo-China	1,035,116	4,708,468
United States	30,268,708	56,268,921	Java	1,099,217	5,557,362
Continental Europe, exclusive of Russia	34,443,925	68,025,477	Total	366,329,983	583,547,291

The chief significance in these figures is found in the large increase in the trade of Japan, Java, and India. The figures for the United States, though in percentages by no means so large as some others, are yet safely favorable.

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Among the Empire's imports, textiles take up by far the largest place, fully one-third of the total. Last year, because of the war, perhaps, and a depressed money market, these show no increase. Fine harvests in the north and new ideas, due to the vast movements in the Orient, give great promise of future activities far surpassing any in the past.

ADVENT OF HEATING STOVES.

The British consul at Niuchwang writes that the Chinese are beginning to take to foreign stoves for heating their houses and that their use is likely to extend, in which case there might be a big market for these goods, as the winter in Manchuria is long and very cold. For the past year or two a native has been making small stoves of a foreign pattern, weighing about 50 and 70 pounds and costing $5 and $7, respectively. It is reported that the annual sales of this local manufacturer amounted to about $1,000. This year the demand has greatly increased, owing partly to the needs of the large number of Japanese who have come in, and the native manufacturer recently had in hand orders amounting to $5,000, and was obliged to refuse many orders which he could not execute. The material used is old iron from abroad.

COCHIN CHINA RICE EXPORTS.

Commercial Agent Stang, of Saigon, says the exports of rice this year were far below those of last year. Outside of a few recent transactions with France and the Philippine Islands, business is at a standstill, owing to high rates, no change having occurred for a fortnight. According to tidings from the interior, the cultivation of the new crop is going on under normal conditions. Exports from January 1 to July 28 amount to 717,287,455 pounds, against 996,456,879 pounds for a like period last year.

KOREA.

COMMERCIAL PROGRESS.

THE RUSSIAN-JAPANESE WAR WAS HELPFUL.

Now that the war in the East is over, Korea will come in for a great deal of consideration and discussion, commercial, financial, and industrial. The year 1904 was one of the best in Korea's history. The war helped rather than hindered trade, the commercial highways being held open. Cereals yielded large crops and sold high, both Japan and Russia buying. Labor was abundantly supplied with work at good wages. Much of this had to do with the movement of troops. This brought in millions of dollars of unexpected and unusual money. It is interesting to note that the Koreans never had so much money to spend and that they spent it freely; hence any improvement in Korea or in the East is bound to be followed by advantages to foreign trade. One disadvantage, due doubtless to the war, and partly to the increased wages, was the increased cost of living. This advanced 50 per cent, in some cases fully 100 per cent.

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Railways were built in many parts at about $50,000 a mile, fully $8,000,000 being expended thereon. The gross value of the foreign trade was a little more than $26,617,487, of which $13,701,295 was for imports from abroad. The exports reached $3,466,752. The rest are set over against movements in foreign goods in and out of Korean ports, in transit, etc. Railroad material for more than $2,316,490 was entered. The best array of the year's figures leaves a large balance in favor of foreign lands and an adverse one against Korea. The mining of gold goes on apace, although a good deal of it, needed at home to help the banks and legitimate business interests, goes abroad as bullion. Last year's gold exports were $228,500 less than those of the year previous, not a bad sign if it does not indicate a decreased output of the mines.

INFLUENCE OF JAPAN.

A large part of the banking business is in the hands of Japanese and is tending more and more toward complete absorption by them. Everywhere progress and prosperity are marching hand in hand. Natural hindrances to trade are being overcome by scientific methods worthy of the West or by expedients worthy of the East. For example, the shallowness of the river at Chemulpo long hindered the arrival of large vessels. This is to be obviated by running rails over bridges to two islands near deep water. The work is being done by the Japanese. Trains are to run from the mainland alongside of steamers docked on the deep-water side of the islands. Rocks have been blasted, piers, docks, wharves, etc., built at great cost; but it is believed the increase of business expected will more than make up for any probable expenditures.

The latest population figures gives Korea 6,000,000 souls, including Ham Keung, a province in the north, under Russia before the war. Seoul, the capital, has 200,000 and is constantly increasing. There are 50,000 Japanese in the Kingdom.

RAILWAY RATES.

DECREASED EARNINGS THE RESULT.

The following report on increased freight charges by railway company controlling traffic between Seoul and Chemulpo comes from Vice-Consul-General Straight, of Seoul:

On July 1 the Seoul-Fusan Railway Company, which also controls the line to Chemulpo, raised the general freight rates on the latter from 1.24 to 3.47 yen per ton. Cargo has heretofore been considered under two heads—goods in parcels and goods in bulk. A uniform charge is now made at the former and higher rate. The line between Fusan and Seoul has been running at a loss. In levying this new rate the company evidently hoped to swell its receipts by imposing a heavier tax on the best-paying portion of the system. Instead of increasing earnings, however, the railroad has already lost heavily. Shipments formerly averaging 240 tons daily have fallen off to 65 tons. Cereals, kerosene, sugar, and shirtings have made the bulk of the

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trade. No previous notice was given to shippers of the increase in rate. Announcement was made on July 1, and the change went into effect on that date. The Chinese and Japanese merchants of Seoul and Chemulpo were the principal sufferers. The latter, through their chambers of commerce, at once lodged a protest with the railway company. Up to the present time, however, they have received no assurance that the now exorbitant tariff would be reduced.

OPPOSITION SERVICE ORGANIZED.

In opposition to the railroad these merchants have now organized a service from Chemulpo up the Han River to Seoul. Arrangements have been made with the Osaka Shosen Kaisha, one of the principal companies engaged in the Korean trade, for a number of launches and light-draft steamers to tow the river cargo boats. Goods will be loaded on lighters at Chemulpo and examined thereon by the customs officers of that port. From Yongsan, the point at which the goods for Seoul will be discharged, the Seoul Electric Company (American) has contracted to carry the freight over its car line. The total charge from Chemulpo will be about 1 yen per ton, lower even than the former railway tariff, the one disadvantage being the closing of the river for over three months during the winter. For some years past there have been heavy annual shipments of beans and pease from Yongsan to Chemulpo, and the steamers running under the new arrangement will therefore be certain of a reasonable amount of return cargo.

It is expected that steps will be taken to bring complaint against the railway company's action before the authorities in Tokyo. The Seoul-Fusan Railway is a semi-Government undertaking, and has been heavily subsidized for the express purpose of encouraging Japanese enterprise in Korea. The Government, it is suggested, would be justified in compelling the company to cancel the objectionable order, as it enjoys a monopoly and the recent increase is in restraint of trade.

MANCHURIA.

EVIDENCES OF PROGRESS.

RAPID ADVANCE IN REAL ESTATE VALUES.

Consul-General Sammons, writing from Niuchwang, Manchuria, calls attention to prevailing conditions in an interesting report. He says:

Ever since the Japanese-Chinese war prices in Manchuria have been advancing. In land there has been a "boom." Small tracts that were purchased a few years ago for small sums are now being disposed of at small fortunes. Desirable tracts in the foreign settlement sell as high as $8,000 and $9,000 gold per acre. These extraordinary prices have not been permanently established, and it is felt that after the war is over there will be a gradual falling off in land values and rentals.

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Following are some comparisons in land values in gold per square foot. These figures show a decline in values following the Boxer troubles and continuing until the Japanese got the upper hand—1902, $1.15; 1903, 75 cents; 1904, 60 cents; 1905, $3.35. These are very conservative quotations from parcels of land in the foreign settlement. An indication of the rise in prices can be had from the fact that a parcel of good residence building land which was bought for $2.100 gold three years ago was recently sold for $15,400 gold. The advance in prices had been very marked during the present year (1905), particularly after the battle of Mukden.

RENTS.

Unreasonable rents are asked and usually secured. The demand sets the price, and the demand far exceeds the supply. One of the oldest foreign residents of Niuchwang has been paying a nominal rental for years, $17 gold per month, for a small one-story house. This summer an enterprising Japanese merchant offered $200 gold per month for the premises. A Japanese shipping firm, located on the "bund," is paying at the rate of over $200 gold per month for a very ordinary double office and storeroom building, about 40 by 100 feet, and ground space in the rear, which for the past ten years did not net the owner $25 gold per month.

The cause of abnormal advances in land values and rentals is due, of course, to the influx of Japanese merchants. Besides, the war has, directly or indirectly, much to do with prevailing conditions. There is a congestion of Japanese merchants as well as of goods from practically all nations at Niuchwang. The Japanese consul at Niuchwang has advised many of his countrymen not to come to Niuchwang or Manchuria at this time, but nevertheless the influx continues.

Below are given comparative average prices of food stuffs, bean cake, building material, and labor for the years 1899, 1901, 1903, and 1905. American standards are given below, although in the local markets catties and piculs in weights, Japanese war notes Niuchwang taels, and Mexican dollars are used. Laborers work, on an average, nine hours per day, often including Sundays. The figures represent gold prices.

Items.	Unit.	1899.	1901.	1903.	1905.
Rice	Per pound	$0 015	$0 018	$0.020	$0.022
Millet seed	do	.0076	.0072	.011	.014
Chickens	Each	$0.08- 15	.15	.50	.60
Eggs	Per dozen	.03	.054	.06	.072
Meat	Per pound	.04	.06	.08	.12
Beef	do	.035	.05	.07	$0.15-.20
Mutton	do	.04	.07	.08	.13-.20
Fish	do	.02	.04	.08	.14
Beans	do	.0075	.010	.012	.017
Bean oil	do	.033	.038	.043	.06
Bean cake[a]	Per ton	15.12	16.80	18.48	20.16-30.00
Brick	Per M	4.00	5.00	7.50	12.50
Native timber	Per cubic foot	.30	.35	.45	.50-1.00
Carpenter	Per day	.10	.15	.25	.40
Cooly	do	.07	.08	.10	.25-.40
Mason	do	.09	.12	.22	.33-.40

[a] Bean cake is sold in units of ten pieces, weighing 52 catties, or 69.33 pounds, each. The price for ten pieces has varied from $15 50 to $22.50, Japanese war notes, during the season of 1905. The rise in the price of bean cake is partially due to the decrease in the value of silver.

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JAPAN.

MARKET CONDITIONS.

SUGGESTIONS FOR AMERICAN MANUFACTURERS · MARKING, PACKING, AND DELIVERY—RECOGNITION OF OLD CUSTOMS.

Special Agent Crist, who has been assigned to investigate trade conditions in Japan, furnishes several reports in which the condition of the general markets of Japan are alluded to, and in which valuable suggestions are furnished in regard to the packing, marking, and shipment of goods from the United States. The special agent mentions printing paper, cotton piece goods, hardware, and a number of other commodities for which a profitable market may be found in Japan. What he says about the importance of observing old established customs should not be overlooked by persons interested in trade with the Orient. Mr. Crist's first letter, which is largely devoted to printing paper, marking, and packing, follows:

English firms distance all others here in stationery and printing paper. Bids have been solicited and obtained from San Francisco, but the terms were not satisfactory. English firms make lower rates than were offered by Americans. The Methodist Publishing House, an American concern, does a book and printing business of from $40,000 to $50,000 annually. The business has been built up in the past six years and negotiations are pending to double the capacity. The mass of printing has to be done on the cheapest kind of paper, as the purchasing power of the individual Japanese is very limited.

There are a number of small printing establishments in Yokohama and Tokyo. Mr. James S. Cowan, general manager of the Methodist Publishing House, says if he can receive samples with prices laid down at Yokohama, he would be glad to take an American agency for printing papers of every kind. If the proper paper can be supplied at desirable prices he would purchase from the United States. In sending proposals with samples, freight by both the overland and the Suez routes should be ascertained by exporters, and proposals should state prices by the respective routes. The overland and Pacific route is quicker but more expensive than the Suez, which is longer but often as satisfactory. Standard Oil ships, and perhaps others, go direct to Yokohama and carry miscellaneous freight in addition to their regular cargoes. Steamers going by the way of English ports and stopping at Shanghai often have to lay over at Shanghai from two to four weeks discharging and taking on cargo. The cheapest news paper costs, laid down at Yokohama from England, $1.20 to $1.45 per ream. I believe there is a good opportunity in this market for American printing paper.

PRINTING PRESSES IN USE.

The Japanese are making and using printing presses for octavo size, 16-page forms, with capacity of from 1,200 to 1,500 copies per hour. These presses sell at $700; 12°, 8 page form, for book and periodical work at $250. They have also copied and use the Hoe press of twenty-

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five years ago. All of these presses appear to be constructed of inferior material and soon shake to pieces.

The first two classes of presses might be displaced by presses built in the United States and constructed with a capacity of 2,000 impressions, or thereabouts, per hour. The American presses, being stronger in construction and in every respect superior to those in use here, would undoubtedly commend themselves to publishing houses. The presses in use here are hand-feed rotary presses, and this fact should be kept in mind by parties who may make proposals for supplying paper. Mr. Cowan will install his new plant with American presses if he can secure them at reasonable prices. He is desirous of securing catalogues and proposals for presses from American builders. In the installation of his new establishment Mr. Cowan contemplates the use of electric motors from one-half horsepower up, either by direct connection or by belt to the presses, and would like to receive proposals and catalogues of motors, power to be supplied by street-railway current. A statement of route on which prices are based should be given, and a description of the motors, etc., should be such that a layman can comprehend.

COUNTERFEIT TRADE-MARKS.

I was informed by a gentleman just returned from Manchuria that it is absolutely imperative for all goods with American trade-mark to have the trade-marks printed in Chinese characters. Many are now so indicating their marks. In cases where this procedure becomes a new departure that fact should be so stated in Chinese, as the sale of the goods might and very probably would be damaged by the means adopted to give additional protection. This precaution is necessary by reason of the great temptation to counterfeit.

Counterfeiting of brands is practiced to a large degree and in a most ingenious manner. For instance, Colgate's soap appears on the counterfeit brand as "Culgate's soap." In the case of condensed milk of a popular brand that has been counterfeited, the counterfeit will be frequently found in a putrid condition. This not only displaces the American goods, but, what is worse, damages their character. There is, therefore, imperative need of observing every precaution to guard against these nefarious practices. The precautions suggested regarding brands and labels apply to articles shipped to all Oriental countries. Instances are cited where profits have been destroyed as a result of shipping by freight light-weight articles in mass which by reason of the great bulk of the packages call for high tonnage measurement, whereas by division into small packages they could be sent by parcel rate and in many instances by mail. An importer cited a case where he had to pay $37 gold for a consignment in bulk which could have been sent in small packages, the postage on which would not have cost over $7 or $8 gold.

In shipping cotton in bales or manufactured goods in packages the greatest care should be exercised to plainly indicate all markings, such as addresses, grades of cotton, etc., and in such a way as to insure indestructibility as far as the legibility is concerned.

LOSS FROM BAD PACKING.

There are now something like 200 or 300 bales of cotton in one importer's storehouse for which he can get no claimant, and which will

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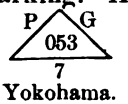
prove a dead loss to him by reason of sprouting, resulting from bad packing. The parties for whom the cotton was purchased refuse to accept it. In packing, the English line their cases with tin or zinc. The tin or zinc excludes water in bad voyages via Atlantic and Suez, and also prevents theft. Cases can not always be opened until delivered, and then no claims for damages will be allowed. Claims have to be made within forty-eight hours. Any damages sustained by poor packing must be borne by the consignee if there be no commission merchant here who acts for him. If the commission merchant or importing agent is acting for a retailer or jobber he has to bear the loss. Every shipment made to foreign markets should be made with the question of loss by transshipments, rough handling, dampness, and theft kept prominently in mind. Loss of one shipment does not mean that loss alone. No further orders will be given to such exporters.

I was told by the manager of the American Trading Company of instances of poor packing of salt fish—a great export of the Pacific slope—in which the cases were of such light material that when placed in slings to hoist from the ship the weight was so great and the cases so light that they split in two and wasted the salt and fish to such an extent that fully 50 per cent of the consignment was a dead loss. The same thing happened to a consignment of wire nails in kegs. The wood of the kegs was selected because it was lighter in weight and cheaper than ordinarily used. When taken from the hold the strain of the sling and of the weight in the keg upon their sides caused them to open their heads and wire nails were showered down from every load taken out. Salt fish rot when exposed to the sun minus their salt, while nails rust if it is raining. Strap iron hoops or wire hoops should be used on kegs and barrels, and they should be so stayed by staples as to prevent slipping off, as often occurs when not stayed.

Printing paper is shipped frequently by Americans, wrapped in coarse wrapping paper only; at other times with crates in addition; rarely in boxes. Boxing was preferred in the past by the Japanese, but the English have perfected a bale which is now preferred and the Japanese will have paper in no other way. The bale is made up by first wrapping heavy wrapping paper around a ream of paper, and incased in a stout burlap. On the bottom and top of this are placed 1-inch boards nailed together by three cleats of 1-inch stuff, over which pass three heavy iron straps. This is then all encircled by a fourth heavy iron strap running lengthwise.

AN EXAMPLE FOR MARKING.

Sole leather almost invariably may be shipped by being rolled up and stoutly tied. Finer grades should be cased up. It generally comes in long boxes about 5 feet in length by 1½ by 1½ feet, with three cleats running around the four sides, dividing the case into thirds.

Reference has been made to marking. All cases should have marking in bold type. A typical mark is 

Yokohama.

The triangle and letters P G are the signs of the importing or commission merchant or concern. The numbers within the space indicate the order number, while that out-

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side indicates the number of the case, and the name the destination. The case number should never be omitted, the cases of the consignment being thus numbered in their sequence. All the figures should be in bold lines, the geometrical figure never covering an area less than a square foot. The color should be in contrast with the ground. For color like sole leather, white would appear preferable to black, as black is the general color of dirt and on brown is readily obscured. The gross weight, tare and net, should also appear on cases. This will enable a whole consignment to be proved up by opening one and computing the rest.

USE OF KEGS AND BARRELS.

Straight-sided kegs may be used when made of tough light wood and made with double sides. They pack closer and give great satisfaction. The hoops go around kegs about 21 inches in height by about 12 inches in diameter. Cleats should be placed in heads of all barrels and kegs. In reference to hoops being stayed on, on bulging-sided kegs, I am told that Lloyds refused damages on loss in a consignment of printing ink in kegs which sprang aleak by reason of the hoops slipping, saying such kegs were not properly constructed. Such commodities as crystal citric acid may be shipped in light-weight kegs. Kegs of a construction similar to beer kegs are needed with printers' ink. Candles from Burma are shipped in boxes similar to those used in America, with the addition that they have iron straps around them at each end, although the American boxes have to travel many times farther. The fact that shipments from America have to go over 10,000 miles with many transshipments does not appear to be considered by Americans. This handling entails vastly more strain on the commodities as well as on the cases than interstate shipping does.

Tin plate is shipped packed in comparatively light cases, but around each quantity of tin plate, amounting to bundles 2 inches in height, there is wrapped a sheet of other tin plate, as the plate is liable to rust in this damp climate unless protected in this manner, for the case almost invariably splits under the strain of handling by the coolies. Lead sheets for lining tea chests is bought of England. Wire nails are packed in strong kegs with cleats on heads and in 133⅓-pound, or 1 picul, size or capacity. This is the American method and met with such favor that the Germans promptly copied it.

The Singer sewing machine evidently is a favorite here, as they are seen in almost every Japanese tailor store in actual use. The company has an agency here and sells on the installment plan, as in America.

CARELESS METHODS.

IMPORTANCE OF CLOSE SUPERVISION IN PACKING.

In the following letter Mr. Crist directs attention to the loss that attends careless methods in preparing goods for shipment to the East. He cites a number of cases in which what seems to have been inexcusable careless packing was exhibited by American exporters, and declares that unless the methods that have been followed by so many

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American exporters are corrected there can be comparatively little progress made in trade with the Orient. Mr. Crist says:

A representative of an English agency, which has been handling American bicycles for over fifteen years, told me that during the present year his trade in American bicycles had almost entirely ceased, while the demand for English wheels has rapidly increased. He has been unable to get American bicycles for less than $40 gold. Even at that price the delivery is so slow and unsatisfactory as to practically prohibit their sale. One order of $45,000, of which he spoke, placed in April by cable, accompanied by a letter of credit, did not result in securing any more prompt delivery than an order made the latter part of July. On the other hand, a cable order to England the last part of July for 100 bicycles brought a prompt cable response giving the date of shipment, steamship line, and charges. This consignment is expected within the next few days. This cable order was forwarded by the agency above referred to as handling American bicycles, as they are also agents for an English machine, both machines being standard, well-known makes. The dealer was so well pleased with the English treatment that he immediately forwarded a letter of credit to cover an order for 200 bicycles, one-half the number for September delivery and the remainder for October. These machines are delivered, including cartage, insurance, and freight, at Yokohama for $28.12 each. The duty, formerly 25 per cent ad valorem, is now 35 per cent ad valorem. The retail prices of the best bicycles vary from $62.50, at Yokohama and Tokyo, upward.

NO MORE ORDERS FOR AMERICA.

The dealer referred to has decided to place no more orders in America. The order given in April was for delivery at regular intervals throughout the present year and constituted the lion's share of his business. The English order was given to ascertain what could be expected from that source. Delay in filling orders almost invariably results in disastrous loss. This is particularly true of goods that are wanted during a certain season. In spring and early summer it is necessary for bicycle dealers to be well stocked in order to meet seasonal demands. An order cabled any time in April should bring delivery within the next month, certainly not later than thirty days, if goods are shipped via Pacific ports. This special case of delay not only caused unusual embarrassment, but involved an increase of 10 per cent import duty by reason of the new rate which went into operation on July 1 last.

SELECTION OF ROUTE.

The selection of a route for shipment has a very important bearing upon the entire export problem. I was told of an instance which illustrates how vital this question is, and how important it is for exporters to study carefully not only the cost in money for shipping by various routes but to acquaint themselves with the length of time consumed in conveying freight and passengers by the different routes, and also to consider the seasonal influences which may affect the sale of the merchandise in the market for which it is destined. By familiarizing themselves with such details, and especially those relating to shipping, they can advise the consignee of the date of sailing and route over

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which the shipment is to go. This is quite important to the importer; in fact it would be considered an absolute essential by the exporter if he could but go to the custom-house of some large commercial center like Yokohama or Kobé and see the work of handling goods. Here the ships discharge their cargo onto lighters, which in turn pass their burdens to the hataba, or custom-house. Coolies do the handling; and even when the consignee or his agent is aware of the date of arrival of the ships bearing his goods, his troubles are but half over.

DELAYS IN DELIVERY.

All of the cases in any one consignment may not be landed by the same lighter; indeed, the reverse is more likely to be the case, several lighters having only one case each; others may have several cases. The parts of the shipment may be scattered over the entire custom-house. When information as to the steamship line is given, this leaves the consignee or agent to determine upon the date of arrival, which in most cases he can do, as the dates of arrival of ships on any American line are sufficiently far apart to necessitate not more than one or at most two extra calls before arrival of the ship bearing his merchandise. It may seem that these troubles should be borne by the importer, but it is well known in the Orient that they cause a great deal of unnecessary friction in commercial relations, friction which mercantile houses of other countries are constantly seeking to lessen in every way. One American bill of lading which stated that a consignment was shipped by way of "the Pacific Ocean" caused no end of annoyance, inconvenience, delay, and loss of both time and money to all concerned at the port of arrival. So great has been the embarrassment caused by nondelivery of goods at expected times that it has occasioned the loss of further orders.

ATTENTION TO DETAILS.

The attention paid to the details of packing, freight, cartage, insurance, bills of lading, invoices, and to everything that is intended to produce promptness, by the English, who have the bulk of oriental trade, and by the Germans, who are strenuously endeavoring to increase theirs, is remarkable. The success they have achieved is in a very great measure the result of that attention. In this market the praises of American goods are sung on every hand and a disposition is manifested to favor those goods wherever possible, but profits are what count, and while the margin between purchase and selling prices cuts a great figure, it is not the sole standard by which to calculate profit and loss. The element of time figures greatly in the equation. Time saved means money in pocket as much as margins do. When it takes from two to three weeks, and even longer, to find one's merchandise when as many hours, or at most as many days, should suffice, it does not take very much effort to see that care in details, which in great measure saves much to the importer, is very essential.

CARE IN PACKING.

Care in marking has been referred to previously. Delegating to others such details may appear most desirable to those who have not devoted attention to the points touched upon in the foregoing, but from the view point of those who export from this country as well as import into it, such is not the case. Their conclusion is that greater

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certainty of prompt delivery is secured through their own export departments than by any other means. The instance to which reference was made above was as follows: A consignment of 543 cases of bicycles was ordered from an American concern. Two hundred cases were to be sent in the first lot shipped and at as early a date as possible, 100 cases as soon afterwards as ready, and the remainder when completed. The first 200 were duly shipped, doubtless as soon as possible, but via the Suez instead of via the Pacific. Later 100 were forwarded via the Pacific. This shipment did not make close connection at the Pacific coast and was delayed until a later sailing. In the meantime the remaining cases were packed and shipped via the Pacific and, as luck would have it, by the vessel which carried the second lot. The date of sailing, as shown by the records, was one month later than that of the first shipment. However, they both arrived at Yokohama on the same date.

CONGESTION AND DELAY.

The first steamer having sailed via the Suez with cargo for intermediate ports, having no regular schedule, should not have been selected for a quick delivery, as was shown by the time it made. The result of such a delivery of the entire consignment was a congestion in the importer's warehouses and a consequent delay on the part of the retail dealers in coming forward to buy. They very naturally reasoned that a good deal of money was tied up in the goods, and that the importer, who was also agent, would be forced to come down in his price in order to effect quick sales, and that they could force a reduction if they but held off for a while. This condition would certainly have been brought about if it had not been the good fortune of the importer to be able to obtain his merchandise without having to pay a sight draft upon its delivery. He had been doing business with the American concern for years and his credit was good for that amount. The only expense to which he was put was that attached to this port. This he met, stored his cases in his warehouse, letting the American house wait until he was able to settle. Good feeling on either side is not engendered by such transactions.

IMPORTANCE OF RECOGNIZING ESTABLISHED CUSTOMS.

Instances have been repeatedly cited where our goods have been discarded by the Japanese after original orders had been given or after business had been in progress for some time, because American shippers persisted in sending in goods below the standard of the samples submitted or by failing to continue the kind ordered or desired. In California fruits the shipments have been in some instances below the samples or standards previously maintained, and a loss of the market has been the result. Boston beans put up in California, but below the standard of the eastern article, met with rejection.

In cotton piece goods it is essential that special manufacturing for this market be pursued. Manufacturers should realize that the Japanese retain a certain brand or style for a much longer time than Americans do. Styles of this year must be superseded in America by different ones next, but the Japanese market is steadier and more steadfast in its devotion to any one line or style. Designs and "chops" (trade-marks) in the East have a value annually of many thousands of dollars from the repute in which they stand. Old established con-

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cerns can almost bank upon a sale of a certain quantity each year of the goods which they handle. Their merchant customers will have no others, knowing the market demand for these lines. I am told that suggestions as to changes in design often come from the Japanese, and such changes are at once adopted by the English or Germans, who send in samples of the changes suggested for criticism and comment. Samples of new styles and patterns of the production for the home market are also sent in annually. If any meet the fancy of the Japanese, orders may be given in addition to those regularly placed. Everything is done on the part of the English and Germans to retain their present foothold, and to increase and broaden the the market. Certain widths are demanded by this market. Cotton prints come in 24-yard lengths and 30 inches in width; bleached cottons—white shirtings—in 50-yard lengths and 36 inches in width.

SIZES AND STYLES IN PIECE GOODS.

In making the Japanese clothing the foregoing indicated widths are demanded because they work up more satisfactorily and economically; hence they will have no other. American goods are made in 28 inches, or widths other than 30, and American manufacturers have said they could not weave goods of 30 inches, as their looms were not set for that width. These statements have been sent back from America upon the receipt of samples from importing houses here, with requests for American goods of the desired widths. Some American houses have lost their business here by endeavoring to sell their goods, by using the same samples, to other concerns than those with whom they were dealing in the same city, or within the territory occupied by the complaining concern. This soon becomes known, and is followed by parties here discontinuing further business relations with the offending firm. No argument or inducement will overcome this determination. This method of dealing is never practiced by Germans or English.

I have seen various lines of Turkish toweling ranging from 80, 93, 98, 1.22, 2.50, 3.15 to 4.50 yen per dozen f. o. b., factory wholesale prices, but have not yet received sufficient information relative to cost and values of materials to more than mention this. The cheaper lines appeared to be rather flimsy, but to have good value for the prices asked. Much of this was for China markets. The higher priced towels were apparently of good workmanship and material, and on a par with the best American towels. A singular thing was apparent in all of the branding of the towels. All were of foreign appearance, with names such as Anchor brand, Lion brand, etc.

SHOVELS AND TOILET ARTICLES.

Shovels which I was enabled to examine ranged in wholesale prices from 3.70 to 12 yen per dozen f. o. b., or from $1.85 to $6 per dozen. All of these shovels were of very cheap material, the metal being simply sheet iron of one-eighth inch thickness, fastened to an iron collar by rivets, and with the handle, which was decidedly American in appearance, fastened into the collar by a rivet. There was nothing about the shovels to indicate their origin to be Japanese, but, on the contrary, their style and general appearance was American, while the label was in the English language. I expect to be able to visit the

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factory from which these came. The cheaper grades were round pointed, running from 3.70 to 6.40 yen; flat shovels 6 yen, and scoops from 7.10 to 8.40 yen, according to weight.

I saw some samples of soaps and other toilet articles. Among them the most saleable are American brands, particularly the Turkish bath variety sold by Colgate & Co. at 1.10 yen per dozen. One dealer told me he sold over 100 dozen every two months. High-priced soaps do not have the sale that low-price, highly-scented soaps have. French dentifrices appear to have the lead here, one French variety selling at 55 sen retail for a 4-ounce bottle, and much in demand. French face powders also are used greatly by the more well-to-do classes, while the home product is used by the poorer classes.

RELATIONS WITH KOREA.

JAPAN EAGER TO DEVELOP THE HERMIT KINGDOM.

A visit to Tokyo to meet Mr. Durham White Stevens, diplomatic adviser to the Emperor of Korea, was made by Mr. Crist, which he briefly describes:

Mr. Stevens talked quite freely about the situation of Korea. At present, he said, no one can say just what Korea's relations to Japan are to be, unless they are to be those of subjection to a Japanese suzerainty. The settlement of the question is sure to affect Korea's relations with the outside world. Japan is doubtless eager to undertake the development of Korea and Manchuria, in order to secure a regular supply of raw or partially manufactured products, and to settle those countries with her surplus population, thereby securing a dominating influence in that part of the world. To carry out this policy, inducements will be offered to the Japanese to emigrate thither instead of to the United States.

He said, further, that Japan would welcome heartily any legislation on the part of the United States that would have for its result the discouragement of Japanese emigration to the United States, but that any regulation that might be looked upon as a discrimination against Japanese, such as has been directed against the Chinese, would be met with strong protest on the part of Japanese. He referred to the migratory movements of the Japanese to the Hawaiian Islands and thence to the United States, saying that the Japanese Government is in favor of having that stopped, provided it can be done in a manner that would not be offensive to Japan or that would not affect her dignity. The war has made such inroads upon the vitality of Japan as to make further emigration undesirable. For this reason it is now seriously opposed by both the political parties of Japan and by the Government. Mr. Stevens sees no way at present by which the difficulty can be surmounted.

TRADE IN VEHICLES.

Special Agent Crist sends the following interesting statistics about bicycles in Japan:

In 1903 and 1904, under the classification "Carriages, bicycles, tricycles, and parts thereof," the imports into Japan from the countries

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named were as stated below. The values are given in yens, the value of the yen in United States money being 49.8 cents.

Country.	1903.	1904.
	Yen.	*Yen.*
United States	863,075	724,248
England	80,838	125,255
Germany	22,755	100,202

In 1904 the classification above referred to was subdivided, and under the heading "Carriages, bicycles, and tricycles," the following is the record of imports:

Country.	Number.	Value.
		Yen.
United States	11,654	406,538
England	1,377	84,354
Germany	1,553	64,673

The total imports reported under the 1903 classification was 972,948 yen; under the 1904 classification, 953,200 yen; decrease, 19,748 yen. In view of the very slight falling off shown by the above-quoted figures, the statement made to me by a large importer may be of considerable significance, namely, that the present year was witnessing orders for 10 bicycles in England where 1 had heretofore been placed. The differences noted between the 1903 and 1904 figures were reported under the heading "Carriages, bicycles, tricycles, parts thereof and accessories."

SILK EXPORTS.

LARGE INCREASE FOR THE LAST YEAR.

Consul-General Miller, of Yokohama, gives the exportations of silk from Yokohama, and says it practically embraces the entire silk trade of Japan. He writes:

As very little silk in any form is exported from any other port, this may be taken as practically the export for all of Japan. The export of raw silk from Yokohama for the past three silk years, ending June 30, was as follows in bales:

	1905.	1904.	1903.
America	65,502	49,792	48,252
Continental Europe	28,377	25,100	28,182
England	29	22	.....
Total	93,908	74,914	76,434

The approximate value of exports for the year 1904–5 was $48,000,000.

EXPORTS TO UNITED STATES.

Direct exportation by Japanese firms, and almost entirely to the United States, was as follows: 1905, 31,529 bales; 1904, 20,569 bales, and 1903, 21,985 bales.

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It will be noted that nearly one-half of the export business in raw silk to the United States was conducted by Japanese firms. This is, to a considerable extent during the past season, due to the exigencies of the present war. The total exports to the United States of silk goods, including Habutae and silk handkerchiefs, were $6,076,933 for the year ending June 30, 1905.

This country has made great efforts to increase the volume of its export trade generally, and of raw silk in particular; for when the market shows signs of dropping—that is, when the foreign buyers did not take up arrivals as rapidly as the sellers wished for, and stocks showed signs of accumulating—direct exportation was resorted to and financial facilities were afforded by the chief local Japanese banks for that purpose. The export for the present season, 1905–6, is likely to be considerably curtailed, possibly to the extent of 15,000 bales. The silkworms reared in the spring and summer seasons were affected by unfavorable climatic influences, so that while the yield has been disappointing there is still hope that the silkworms reared in the autumn, the final crop of the season, may give good results, thus making up for the shortage of the two earlier crops.

A THRIVING INDUSTRY.

Another factor which is likely to reduce this year's export is that much more raw silk for Japanese consumption is likely to be required than was the case last year. It is hard to obtain accurate figures as to the quantity of raw silk consumed in this country. Probably from 20,000 to 25,000 piculs is required for the Habutae export trade of manufactured silk and about an equal quantity for home consumption, in all 50,000 piculs. Although there is a certainty of a very large reduction, this year, in the exports of raw silk, it is due entirely to the short crop, and not to a demoralization of the business.

The production of silk for export is one of the most thriving industries of Japan. The total exports have risen in value from 35,058,120 yen in 1891 to 137,026,184 yen in 1904. (The yen equals 0.498 cents.) There is an optimistic feeling among producers, dealers, and the people generally concerning the future of the silk industry of Japan. Inasmuch as the great market for the silk products of Japan is in the United States, this industry depends upon the prosperity of our country; for as long as we continue to consume the silk of Japan at the present increasing ratio the production will keep pace with the demand. Old districts are expanding in production and new ones are being established. The social, economic, and climatic conditions of Japan seem favorable to the production of silk, and a favorable market will insure its development.

PROGRESS IN TRADE.

OPEN PORTS AND THEIR COMMERCE.

Japan has thirty ports open to foreign trade. At four of these, in 1902, Japanese vessels registering 19,609,745 tons, and foreign ships of 12,092,615 tons, cleared. Osaka, sometimes called the Liverpool of Japan, as Japan is often called the England of the East, is a veritable beehive of human industry. Day and night there is a ceaseless whirl of wheels—a murmur of machinery, rattle of carts. It has a million

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people. Eight years ago $11,250,000 was appropriated to build docks, improve its harbor, etc., with a view to what will be wanted when the Panama Canal is cut. Nine millions have been spent. It is thought that from fifteen to twenty millions more will be expended before the city has what its engineers deem necessary. Everywhere one finds the people busy not only in the work of to-day, but building for to-morrow. Breakwaters, dikes, piers, wharves, warehouses equal to those of Liverpool, London, or Hamburg are being built.

IMPORTS AND EXPORTS.

In 1884 the imports of Japan were valued at $25,000,000, of which the United States supplied $2,000,000, Great Britain $11,000,000. In 1904 Japan bought $185,000,000, of which we furnished $29,000,000, and Great Britain $37,000,000. The principal items were:

Mineral oils	$5,500,000
Flour	4,600,000
Raw cotton	4,500,000
Machinery	2,000,000
Iron and steel goods	1,900,000
Leather	1,700,000
Cotton manufactures	1,100,000

followed by wheat, other cereals, canned provisions, cars and carriages, leaf tobacco and coal, in the order named, the last five showing figures of less than $1,000,000.

Japan's exports in 1904 amounted to $159,000,000. The principal buyers were:

United States	$50,423,000
China	33,857,000
France	18,087,000
Hongkong	14,024,000
Korea	10,154,000
Great Britain	8,787,000
Italy	6,011,000

Here we see how valuable is our trade to Japan, our purchases being one-third of her total exports. This result, in the face of protective tariffs in both lands, proves that neither treaties of reciprocity nor tariff revision are needed to build up our foreign commerce. Quality and prices of goods and demand, both ways, regulate all that. The growth of Japan's exports in the last twenty years is shown by the annexed table, which gives the values for the year terminating each decade. The share of the United States is also shown:

Year.	Exports.	Our share.
1884	$29,000,000	$11,500,000
1894	56,000,000	21,500,000
1904	159,000,000	50,500,000

Of these the United States took—

Raw silk and waste	$30,400,000
Silk manufactures	6,100,000
Tea	5,600,000
Mats and matting	2,300,000
Porcelain and earthenware	1,000,000

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followed by camphor, straw braids, wood chip braids, sulphur, toothbrushes, and rice, ranging downward from $620,000 to about $300,000 each.

MERCHANT MARINE.

NEW LINES OF STEAMSHIPS ESTABLISHED.

Consul-General Miller, of Yokohama, advises the Department of State that the Toyo Kisen Kaisha (Oriental Steamship Company) is contemplating establishing a line of steamers between Hongkong and Chile, touching at Noji, Kobe, and Yokohama. The company expects to charter two steamers of 4,000 tons each early in October, 1905. This line is to carry Chinese and Japanese laborers and general passengers to the South American States, and return with cargoes of nitrite of soda and other articles to Japan and China. Should these two steamers find profitable employment, the company intends to increase the number to six of about the same tonnage.

In addition to the foregoing, the company has contracted with Mitsu Bishi Shipbuilding Yard at Nagasaki for the construction of two steamers of 12,000 tons each, to be completed in December, 1907, and June, 1908, respectively. These two steamers when completed will be placed on the company's Hongkong-San Francisco Line. Other vessels now under construction and to be completed within this year at the Mitsu Bishi Shipbuilding Yard are as follows:

Name.	Tonnage.	Name.	Tonnage.
Iki Maru	1,500	Tetsurei Maru	2,100
Tsushima Maru	1,500	Joshin Maru	1,200
Taishin Maru	1,250	Bazan Maru	1,200

In addition to the foregoing, two vessels are ordered, materials for which are on the way to Nagasaki. They are to be of 7,463 and 1,530 tons, respectively.

The Japan Railway Company (Nippon Tetsudo Kwaisha) will spend about $500,000 to purchase three steamers in the near future. These vessels will run between Aomori, the northern terminus of the company's line, and Hakodate.

INDIA.

GROWING COMMERCE.

IMPORTS FOR THE LAST FISCAL YEAR.

From German sources it is stated that the imports by sea for the last fiscal year aggregated $322,288,305 in gold. The following countries supplied goods to the value of figures attached:

Great Britain	$210,227,895	France	$6,017,370
Austria-Hungary	13,361,215	Russia	5,575,720
Germany	12,440,325	United States	4,952,470
Belgium	11,743,840	Italy	4,139,715
Straits Settlements	10,193,725	Japan	3,911,130

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ELECTRIC-LIGHT PLANT.

An electric-light plant is to be erected in Mussoorie, British India. Offers are invited for the following materials: Steel pipes, water turbines, alternating dynamos, switch boards and instruments, transformers, induction motors, pumps, tools and implements for the workshops. The foregoing are to be supplied and erected by the contracting party, but the following simply supplied: Plain copper conducting wires, isolators, arc and incandescent lamps, telephone plants, tools, sundry materials. The conditions may be obtained from the city engineer, C. H. Chanan, Municipal Office, Mussoorie, upon deposit of 75 rupees (about $25), which sum will be returned upon presentation of bona fide offers. Sealed offers in the prescribed form, bearing the heading "Tender for electric lighting and waterworks scheme," are to be in the hands of the "Chairman, Municipal Board, Mussoorie, U. P., India," by October 23, 1905.

SOAP IN SINGAPOORE.

A Belgian consular report states that in addition to toilet soaps large quantities of soft and hard household soap are imported into Singapore. These are all of the cheaper quality, chiefly in bars of 1½ pounds, packed 20 bars in case, and sold at 6s. per case c. i. f. delivered. Potash soaps reach us in metal casks, and are principally sold in the ships' stores. The bulk of the soap trade is in British hands, and we receive more than $300,000 worth of English soap every year.

THE INDIAN GOVERNMENT has prepared plans and drafts for improving the city of Calcutta. The estimated cost of the projected works is $27,500,000, which is to be raised by a loan. The latter will be guaranteed by the government, but the city is to pay the interest and amortization, for which purpose a tax on jute and on real estate is to be levied.

CONSUL-GENERAL WILBER, of Singapore, reports that he was informed by the agent of the Togo Kisson Kaisha, a line of steamships belonging to the Japanese merchant marine, that his company contemplated making Singapore the terminus of their line instead of Hongkong, and that it was further contemplated to extend, in the near future, this service to Hawaiian ports on the Pacific coast, including those of Mexico, Panama, Peru, and Chile.

AT MUSSOORIE, British India, electric lighting and waterworks are to be installed. Bids for furnishing supplies for these plants are to be sent in by October 23 to the chairman of the municipal board, Mussoorie, India.

THE RAILWAY board of British India has signified its intention to establish the block-signal system on all railroads.

THE GOVERNMENT of British India has granted concessions for constructing 230 miles of canal for the purpose of irrigating the Hanipur district. The estimated cost of the work is 4,000,000 rupees.

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AUSTRALASIA.

NEW SOUTH WALES.

PROGRESS DOUBTFUL.

DECREASE IN IMPORTS, INCREASE IN EXPORTS.

Vice-Consul Keightley writes from Newcastle, New South Wales, concerning the trade of Australia. He says that Australia was prosperous in the eighties, but is now in a doubtful way. Still there was an excess of exports last year, leaving a trade balance in her favor. He writes:

The volume of Commonwealth trade statistics now issued shows the imports of Australia were $180,162,696, a decrease as compared with the previous year of $8,832,697, while the exports were $279,770,218, or $37,759,173 more than those of 1903, and the excess of exports rose from $53,015,651 in 1903 to $99,607,522. The excess of exports last year was unprecedented, and a good many millions beyond the interest which had to be paid upon the British capital located here. The conclusion arrived at was that a substantial amount had been sent to England, either to reduce indebtedness or to hold on there, because there was not adequate employment in Australia. Possibly this feature will not be so prominent during the current year. The shipments of gold from the eastern States are reduced, but even so, the excess of exports is bound to be very considerable. It is evident that the flow of British capital has been arrested; but even allowing for this, it is a remarkable transformation to find that whereas during the twenty years 1885-1904 the imports have been practically stationary, the exports have increased by more than $150,000,000. Yet in the eighties Australia was booming, and now it is the reverse.

APPORTIONMENT OF IMPORTS.

There is one return which shows the apportionment of the imports between the different States—not the ports at which the goods were received, but the States where the goods were actually consumed—which discloses some remarkable results. The total entered for consumption was $173,354,462, of which $57,604,760 were credited to this State (New South Wales), $51,833,091 to Victoria, $21,344,469 to West Australia, $18,765,224 to Queensland, $16,546,100 to South Australia, and $7,260,818 to Tasmania. On a mean population basis, each State is credited with the following consumption of imported goods per capita:

State.	Stimulants and narcotics.			Other dutiable goods.			Free goods.		
	£	s.	d.	£	s.	d.	£	s.	d.
West Australia	1	6	4	11	16	4	5	10	6
South Australia		6	11	5	16	3	3	0	2
Victoria		7	6	5	12	3	2	16	3
Tasmania		7	8	5	7	9	2	10	4
New South Wales		8	7	5	8	4	2	7	2
Queensland		10	9	4	12	8	2	5	9

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West Australia, with its large proportion of adult males and mining population, is undoubtedly in an exceptional position; but that South Australia, Victoria, and Tasmania should be larger consumers per head of imported goods than New South Wales and Queensland appears strange. Both New South Wales and Queensland have areas occupied far in excess of the other States and their consumption of imported goods has always been in excess.

SEEKING EMIGRANTS.

FARMERS SOUGHT IN GREAT BRITAIN.

The London Mail, in an article referring to competition between Australia and Canada for emigrants, says that the Australian colonies are awakening to the desirability of attracting the right kind of settlers. New South Wales recently sent to London Mr. T. A. Coghlin, one of the first authorities of the country, who was accompanied by two officials of the agricultural department of that colony. Their mission is explained by Mr. Coghlin in a statement which is given by the London Mail. Mr. Coghlin says:

"The Government has resumed possession of several of the large sheep runs, and is willing to let them out in small farms on very liberal terms. Supposing an improved farm is valued at £3 an acre. A settler can obtain possession of, say, 300 acres at 1s. 6d. an acre a year for rental and purchase money. At the end of ten years the freehold is granted, and in thirty-eight years the farmer has paid off the whole of the purchase money and interest. For those who are willing to take up unimproved land the Government offers to sell it or lease it at the upset price of £1 an acre. These farms are all in what is called the 20-inch rainfall area, settlers are assured of getting crops, and freightage is reasonable. From the farm itself to the London market the freightage on wheat is about 8d. a bushel, as compared with 1s. 2d. from Regina, in Canada."

It is explained by the Mail that yeoman farmers of Great Britain with a little capital are naturally the emigrants most desired by New South Wales, and that a number of such had been secured. Efforts are being made to secure special rates from the steamship companies. This movement has attracted attention in England. The lord mayor recently granted the use of Guildhall for an exhibition of the products of New South Wales.

VICTORIA.

STEEL RAILS FROM THE UNITED STATES.

Consul-General Bray, of Melbourne, reports the successful efforts of an American company to obtain a government contract for steel rails. He writes:

I have the honor to report that the Government of the State of Victoria, Australia, has just accepted the bid of the Lackawanna Steel

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Company of America for a large supply of steel rails and fish plates at £5 13s. 6d. ($27.61) per ton for the rails and £8 9s. ($41.12) per ton for the fish plates for use on the government railways of that State. The contract is for 6,282½ tons of steel rails, of which 5,025⅞ tons are 80 pounds per yard and 1,256⅜ tons are 100 pounds per yard, and 261¼ tons fish plates for 80-pound rails, of which 118¾ tons are of "A" and 142½ tons are of "B" design. The minimum proportions of carbon are 0.42 per cent for the 80-pound rails and 0.45 per cent for the 100-pound rails. The value of the contract is £37,859 ($184,240.82). The conditions provide that the manufacture of the rails is to be conducted under the supervision of inspecting engineers, and final inspection and rejection, if any, is to be made before shipment. The rails are deliverable ex ship's slings at the pier, Melbourne, the contractors paying freight and insurance (with an approved company), but not duty or landing charges.

The contract was open to the world's manufacturers, and bids were received from Great Britain and Continental Europe, as well as from America.

MARSHALL ISLANDS.

CONTENTION BETWEEN GERMANS AND AUSTRALIANS.

Australia after having opened up most of the islands of Polynesia to trade was traveling along happily till the Marshall Islands, by an arrangement with Great Britain, were placed in 1885 under German control. By treaty of 1886 Germany guaranteed the open door in the islands. Two years later the islands were handed over to a Hamburg company, which was given power to impose rates and taxes. The result was a very old but transparent effort to draw trade away from Australia. Finding its efforts futile, under the "open door" arrangement, the Hamburg company proceeded to effectively shut out the Australians by imposing import duties ($15 a ton) on all goods going into the islands. This, as far as German goods went, was taking money out of one pocket and putting it into the other. The Australians were shut out.

Things went well till a year ago the Hamburg company began to go beyond the boundaries of the island to beat the Australians. They began to average their copra purchases. As sole purchasers of the Marshall Island copra they were able to do this effectively, for they could coerce the natives into selling for whatever the company was willing to give. This enabled them to introduce and carry out a system of averaging by which they could pay the Marshall Islanders one price, the islanders asking the Australians another, always a little higher than the Australians could pay. At last, unable to endure it, the Australian Commonwealth threatened to retaliate by giving instructions that no more orders be placed in Germany and that all existing orders be canceled where possible. The threat had a magical effect. Germany is just now revising the fiscal legislation of the Marshall Islands with a view to removing Australia's grievance.

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EUROPE.

GREAT BRITAIN.

MUNICIPAL OWNERSHIP PROBLEM.

VARIOUS RESULTS IN ENGLAND—NECESSITY FOR ADVANCING TRAMWAY FARES.

The question of assuming ownership of public utilities by municipalities continues to occupy attention in England. In a number of English cities the direction of these utilities has been taken over by the authorities, and they have been operated with more or less financial success. Consul Frank W. Mahin, of Nottingham, furnishes a report on municipal ownership in the Nottingham consular district, from which it appears that profitable administration has attended in certain cases, while in others failure is recorded. Consul Mahin writes:

The official reports on the working of the various "undertakings" of Nottingham during the corporation year ended March 31, 1905, having now been published, it is possible to take a satisfactory survey of the subject. There are now 50 miles of distributing mains, all the wires being laid in underground conduits. Consumption increased 5 per cent during the year. The charge per unit has declined every year since the electric works were started in 1895, when the average price obtained was 11.94 cents. It is now 4.14 cents. The net profit of the undertaking in the ten years exceeded $300,000, of which the sum of $158,161 was contributed to the rates—i. e., toward reduction of local taxation—the balance going to the reserve fund. In the past year the rates benfited to the extent of $29,199.

ELECTRIC STREET RAILWAY.

The tramway traffic slightly declined during the past year in comparison with 1904, due chiefly to the closing of a suburban exhibition. The average fare collected was 2.16 cents. The penny stage averages 1½ miles; twopenny, 2.9 miles, and threepenny, 4.4 miles. Before 8 a. m. workmen can ride double distance for single-distance fares, and receive return coupons for evening use at the same rates. This feature is not a financial success. The cars are all double deck; some have the upper deck inclosed. The total receipts averaged 23.78 cents per mile run, and the working expenses 14 cents. The net profit exceeded $100,000, from which the rates profited by $72,997, and the balance went to the reserve fund, which now amounts to nearly $200,000.

ABSENCE OF ACCIDENTS.

One fatal accident occurred during the year—a car colliding with a horse and cart, killing the driver. The last death caused by the cars previous to this was in January, 1902, since which time they have run

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7,250,000 miles through the city's streets and carried 80,000,000 passengers. No other accident of a serious nature occurred during the past year. Forty-six persons were knocked down by cars or fell on the track while crossing it, but all were pushed away or picked up by the automatic catchers without serious injury. Twenty-one cyclists collided with cars, but no serious injury resulted in any case. The greatest number of injuries was to persons getting on or off cars in motion, 242 being injured in person or clothing. Altogether the record is remarkable, considering the miles traveled and passengers carried, and the fact that the tracks follow the busiest streets of the town, some of which are narrow and winding and have steep grades.

PRICE OF GAS, AND PROFITS.

During the year the gas undertaking yielded a net profit exceeding $150,000, of which the rates received $131,395. Consumption decreased in comparison with the preceding year, due largely to the extending use of incandescent burners, which, it is estimated, increase the light obtained from 3½ candles to 20 or 30 candles per cubic foot of gas consumed. The price charged for gas is 60 cents per 1,000 cubic feet to ordinary consumers; for power purposes, 44 cents per 1,000 if not exceeding 50,000 annually used, and 36 cents if more than 50,000. Such special rates, which generally obtain in all the midland cities, are found necessary to compete with gas-power plants and to prevent factories from establishing gas plants of their own. The total mileage of mains is 351. The city area supplied with gas is 10,935 acres, but it is also furnished to surrounding villages and country houses covering an area of 72,426 acres. The gas department's chemical works produce, as by-products, large quantities of crude naphtha, light oil, carbolic acid, creosote, anthracene oil, naphthalene oil, black varnish, brick oil, grease, pitch, pressed naphthalene, crude benzol, crude toluol, cyanides, sulphate of ammonia, oxide of iron, sulphuric acid, and recovered sulphur, the sale of which yields a substantial revenue.

THE WATER SUPPLY.

The water undertaking yielded a net profit exceeding $25,000 during the year, which was carried forward to various accounts—nothing being available for the rates. The number of houses supplied was 72,576; other supplies, 47,408. Estimated population supplied, 326,592. The population of the city is about 250,000. Outside villages and country houses covering 37,482 acres were also supplied. The water comes from 6 wells, 1 artesian. The wells are each about 200 feet deep, several having an additional bore of 100 feet. They are scattered about the surrounding country, where the trend of the sandstone formation favors a copious flow—the most distant being 20 miles from the city. The water is pumped into 5 reservoirs, 3 in the city, and 3 new ones in the country are being built. The total yield is 8,500,000 gallons and the consumption 5,000,000 to 8,000,000 daily. In addition it is expected to receive 4,000,000 gallons a day from the Derwent waterworks project, now under way and to be completed in about five years.

DERBY AND LEICESTER.

The waterworks at Derby were bought several years ago from a private company and have proved very profitable, a large reserve fund

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being accumulated. The past year's balance, after paying working expenses, was over £23,000 ($115,000).

The horse railway was superseded by an electric system during the year. The balance of receipts over working expenses was about $35,000, but payment of various other charges reduced the net profit to about $10,000.

The electricity undertaking yielded a gross profit of about $60,000, but payments on loans and interest reduced the net to about $3,000. The gas supply is from a private corporation.

The gas undertaking of Leicester yielded last year a net profit of $184,927, which went toward reduction of taxes. The net profit from electricity was $20,682, the disposition of which is not stated.

The gross profit of the horse street railway exceeded $45,000, which was consumed by various charges. An electric system is now in operation.

The net profit of the waterworks was $69,216, which went to a reserve fund.

The three cities also control various other undertakings, such as markets, educational institutions, allotment gardens, etc., but these are, altogether, more public conveniences than sources of financial profit.

SOME OF THE DANGERS.

NEED FOR READJUSTING AND ADVANCING TRAMWAY FARES.

Some of the dangers underlying municipal ownership are pointed out in the following report from Consul Daniels, of Sheffield. He calls attention to conditions in that city, and shows that all is not as pleasant as it might be. He says:

The city of Sheffield, in the management of its electric tramway system, finds itself confronted with a condition that some of the more far-seeing members of the city council (notably Sir Joseph Jonas, the lord mayor) have insisted has existed for some time, and that condition is, despite the fact that the system has been operated at an apparent profit, while furnishing cheaper transportation than any system in the United Kingdom, due to a failure to properly charge off a reasonable amount yearly for depreciation of plant. This failure brings them face to face with the necessity of adjusting and raising the fares or operating the system at a loss, possibly, or, at any rate, no profit.

MILEAGE AND EXPENSES.

The report of the tramways committee for the past year shows the following condition: The mileage run was, 1901, 2,315,347 miles; 1902, 3,791,993; 1903, 4,926,083; 1904, 5,768,231; 1905, 6,049,899. The passengers carried rose from 61,450,993 in 1904 to 63,952,283, and the revenue from all sources from $1,130,738 to $1,170,713, an increase of 2,501,290 in number and $39,975 in car mileage, 281,668 greater than that of the previous year. In 1901 each car earned on an average 27 cents per car mile run and the average fare per passenger was 1.8 cents. The figures for the following years were: 1902, 23½ cents and 1.8 cents; 1903, 20½ cents and 1.8 cents; 1904, 19 cents and 1.8 cents; 1905, 19 cents and 1.8 cents. If the fares per passenger in 1905 had been the

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same as in 1901, the revenue would have increased by the sum of $37,472. The average fare per passenger in Manchester was 2.38 cents; Bradford, 2.26 cents, and Liverpool, 2.22 cents.

The average working expenses per car mile in 1901 were 14.5 cents; in 1904 they had gone down to 13 cents, while in 1905 they had been further reduced to 12.8 cents, which is the lowest in the history of the undertaking. Had the working expenses in 1905 been the same as in 1901 the charges would have been increased by $153,095.

The net profit in 1904 was $132,412 and in 1905 $84,317, or $48,665 less. This decrease was not due to cost of management being excessive, because the percentage of that cost was less than ever before; nor was it due to the cost of production of energy, for that cost in Sheffield is among the lowest in the country. The decreased profit was in the first instance attributable to the increased charges in 1905 over 1904, without any corresponding decrease in revenue. Salaries and office expenses previously charged to capital are now transferred to revenue, and represent $10,123; rates and taxes caused by reassessment, $17,817; repairs to cars, permanent way, and power station, $37,536; interest on loans, $35,132; installments for sinking fund, $22,193, making the total increased charges over the previous year $122,801. To be deducted from that were $10,738 decrease in traffic expenses, $2,655 saved in insurance, $12,348 decrease in power expense, a total of $25,741.

COMPARISON WITH OTHER CITIES.

A comparison of the Sheffield tramway undertaking with that of Leeds is given. Leeds has the advantage in the matter of gradients. The population of Leeds is 450,142; Sheffield, 432,940. Car miles run: Leeds, 7,051,823; Sheffield, 6,049,899. Receipts: Leeds, $1,432,347; Sheffield, $1,170,709. Expenditures: Leeds, $784,951; Sheffield, $794,-616. Passengers carried: Leeds, 64,223,660; Sheffield, 63,952,283. Average fare: Leeds, 2.19 cents; Sheffield, 1.8 cents. The average distance traveled in Leeds for 2 cents was 1.57 miles; in Sheffield, 2.48, or nearly a mile more. The lord mayor is authority for the statement that Sheffield fares are 17 per cent cheaper than the next cheapest in the country. If they were based upon Leeds fares, Sheffield would have an increased yearly revenue of $253,058, provided the same number of persons traveled and the Leeds rates were adopted here.

The corporation is constantly besieged with applications for extensions of the tramway service to outlying districts. This is felt to be a policy that ought to be adhered to, but it is apparent to all that no further extensions of the service can be made without providing in some way for increased revenue. It is also conceded now that the past policy of the tramway management has been wrong, in that they have not allowed enough for depreciation and renewals. The city of Glasgow sets aside 6 cents per mile for depreciation; Manchester allows 2.4 cents, and Liverpool 2 cents. Sheffield is supposed to allow 2 cents, but if it had the account, instead of showing a surplus of $84,321, would have shown a deficit of $38,348.

There the matter stands at present. The only remedy in sight appears to be to raise the rate of fare, and that no member of the city council seems to be ready to advocate.

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RIVAL ELECTRIC MOTORS.

THE OMNIBUS AND THE TRAMWAY.

The development of the motor omnibus has led to a controversy between advocates of that vehicle and those of the electric tramway as to comparative cheapness of operation, maintenance, and utility of the two systems. On this contention Consul Mahin furnishes the following:

In a report from this consulate published in Daily Consular Reports for July 3 statements on the relative value of the omnibus and tramway contained in various newspapers were summarized, and the conclusion was reached that the electric tramway seemed to have the advantage in cheapness and utility. The report has brought to this consulate letters and publications from advocates of the motor omnibus, contending, in substance, that the newspaper statements printed in behalf of the electric tramway were incomplete and misleading.

The cost of propulsion for each ton weight of electric car was placed at 24 cents; that of the petrol omnibus at 80 cents. This, while undenied, is claimed to be an unfair comparison, because the omnibus weighs only about one-third per seat of the tramcar weight. The motor omnibuses so far in use carry from 12 to 36 passengers, though 42-seated ones are now being made. It is claimed that the operating cost per mile is but little more for the larger than for the smaller sizes. The double-decked tramcar seats from 50 to 70 passengers.

CLAIMS FOR THE OMNIBUS.

It does not seem to be disputed that the cost of rubber tires for omnibuses averages more than the cost of maintenance of car tracks, allowing for original capital expenditure. It is contended, however, that improvements, organization, and increased knowledge are reducing the operating expenses of the motor omnibus. These, according to the latest official statement made for the omnibus, are 16.10 cents per mile, including maintenance and all working costs; similar expenses of municipal tramways, according to such statistics as are available, range from 14 cents to 14.56 cents per car mile.

The special claim made for the motor omnibus is its availability in certain localities and conditions where the tramway would be impossible or unprofitable. Therefore in urging its merits, it is presented less as a direct competitor of the tramway than as an adjunct to or a substitute for it. One particular field for the motor omnibus lies in towns or on routes where a sufficient number of electric cars could not be run to make a return on the capital outlay for tracks and equipments. In congested city districts such as London about the Bank of England, where cars and car tracks would presumably be a serious obstruction, the motor omnibus expects a clear field. It is remarked also that in any locality the omnibus may always vary its route to accommodate a temporary shifting of the passenger traffic, as, for instance, on Sundays or holidays, when the chief demand for transportation would be on different streets and in different directions than on ordinary business days. For limited rural service the motor omnibus is claimed to be particularly serviceable and economical, and this is especially applied to instances where railways are now using motors

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to link their systems with attractive country and seaside places which have hitherto been practically inaccessible except to well-to-do persons who could afford their own vehicles. For market purposes, too, the motor omnibus of a composite type is expected to prove of great utility in speedily carrying fresh vegetables, eggs, butter, etc., from farm to town.

To sum up, the claim for the motor omnibus is substantially as follows: If every pertinent consideration is given fair weight, it is but little more expensive to operate at the present moment than the tram car, and its comparative newness leaves room for improvements which will sensibly reduce its working expense. It is practically unassailable in congested city streets. In towns having a population of below 150,000 the motor omnibus can, generally speaking, be operated more profitably than a tramway, because the size of the population will not warrant the running of a sufficient number of tram-car miles per mile of track to yield a return on the heavy capital investment. It can change its route at will to accommodate passing demands. It serves as traction for perishable market supplies. It fills gaps on rural routes or it extends facilities similar to those of steam railways. In these various respects the motor omnibus is unique.

INTERNATIONAL SCREW TRUST.

A trust composed of German and English manufacturers has been organized to control the manufacture of screws, and in this connection Consul Mahin suggests possibilities for American manufacturers entering the English and German markets. The consul says:

Something of a novelty is a trust formed of British and German manufacturers of screws. A severe competition has prevailed for a long time in this branch of trade. To end it in apparently the only practicable way, the makers of screws in England and Germany have, through the medium of a newly formed syndicate, advanced prices about 50 per cent and have closely restricted the markets. The British market is to be closed to the importation of German screws. No British orders will be received by German manufucturers after October, and all orders in hand must be executed by December 21 next. In a circular to customers, one of the largest buyers of German screws in the United Kingdom states:

"As the way toward the formation of an international syndicate is now simplified as between British and continental makers, further advances are impending, and it is probable that the British market may shortly be closed to the import of German screws."

As American screws are not shut out by this agreement, a profitable moral may be deduced.

NEW DEPOSITS OF COAL.

The known coal deposits of England have been extended by a discovery recently made in the Nottingham consular district, of which Consul Mahin writes:

Recent discoveries in this neighborhood have added materially to the known quantity of coal underlying British soil. Experimental

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sinking operations have added another colliery to the large number now being worked in this county. The new deposit, reached at a depth of 544 yards, now employs 240 men and is expected ere long to yield 4,000 tons a day. In the near-by county of Stafford, after several years of expensive and apparently useless prospecting, a rich deposit has been discovered and is now being developed which, it is calculated, will yield about 4,000,000 tons of good coal. The discovery is sufficiently important to promise great possibilities for that district and has led to railway extensions into localities where transportation facilities were very meager. There are indications that a valuable field of ironstone lies at a greater depth than the coal seam. Expert estimates that British coal supplies will not be exhausted for several hundred years appear to be fully sustained by deposits in these parts.

COMMERCIAL CABLE TOLLS.

SPECIAL RATES TO THE BRITISH COLONIES—ADVANTAGES OF THE REVERSIBLE REGISTRATION SYSTEM.

Consul Halstead, of Birmingham, furnishes an interesting letter explaining cable facilities that obtain between Great Britain and her colonies. The cable rates were reduced in August to 2 shillings per word, and the new code system authorized by the International Convention of a year ago has been so adjusted that the cost of cabling is materially reduced. In this connection Consul Halstead directs attention of our business men to the fact that, under the reversible registration system, which covers all countries reached directly by the Western Union and Commercial Cable companies, the expense of cabling may be brought to a minimum. The consul gives an illustration of the conveniences and advantages offered by the reversible registration system, the existence of which does not seem to be generally known to our business men. Following is the letter:

The rate for cabling to India was reduced in August to 2 shillings (48 cents) per word, and this, when coupled with the new code system authorized by the international convention a year ago, makes it possible to carry on cable correspondence for about one-third of what it formerly cost. A member of one of the largest Indian business houses tells the London correspondent of the Birmingham Daily Post that there is a vast increase in the number of messages cabled, and as a result of the easier cable facilities many orders are cabled instead of being mailed. The correspondent says he was shown a message containing orders for small quantities of hardware intended for Birmingham factories, such as would, under the old régime, be ordered long beforehand for stock, but are now cabled for as required, and which can be delivered in Bombay within three weeks. It is highly probable that this Indian house, a member of which the Birmingham Daily Post correspondent interviewed, and all the great export merchants in London, Birmingham, Manchester, Liverpool, and Glasgow would, if our business methods were more flexible and our international trade view wider, buy many of the goods they ship to India from American manufacturers. Our people put so many obstacles in the way when foreign merchant firms seek to buy in America, that

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most of these firms, and many have made the attempt, become irritated, despair of effecting reasonable business arrangements, and often buy here and in Germany, when they know they could buy the same goods cheaper in the United States.

Mr. Halstead explains that he has made earnest efforts from time to time to reconcile differences that have arisen between merchants in the Birmingham district and American manufacturers, which have not always met with success, for the reason that our manufacturers have not fully cooperated.

FOR BRITISH COLONIES ONLY.

I attach three copies of the forms which the British Post Telegraph Department uses for "foreign and colonial telegrams only," on which there is added between brackets these words: "Telegrams for North America, Central America, or West Indies excepted." Note the conditions printed on the backs of these forms relating particularly to the authorized abbreviations which are charged as one word only. These abbreviations are very convenient for both business and private purposes, but they are not printed on the cable forms furnished by the British post-office for cabling to the United States, nor on the cable forms furnished by the Western Union, Commercial Cable, and the Anglo-American, or other cable lines to the United States. The inference is that these privileges are not given to American citizens when cabling abroad, nor to foreigners when cabling to the United States.

REVERSIBLE REGISTRATION.

Few Americans doing business with those countries as to which the Western Union and Commercial Cable companies have direct lines have a knowledge of a certain convenience and attendant economy afforded by our telegraph companies, and they are in this respect very progressive, by the reversibly registered cable address. As an example of the advantage of this, say the Chief of the Bureau of Manufactures, Department of Commerce and Labor, wished to have a reversible registration with the consul at Birmingham. He could register with any one of the several telegraph companies the word "Carhal," made up of the two names, and if he wished to cable the consul he would have to address only "Carhal, Birmingham," and need not sign the cablegram, thus saving much in the two-word address, and by not signing, about 27 cents a word. When the telegraph company's English office received this message at the end of the cable line, they would substitute for "Carhal" the full address, Marshal Halstead, American consul, 43 Cannon street, Birmingham, and forward it for transmission on the British Government's land lines. If, in turn, I cabled to the Chief of the Bureau of Manufactures I would address the cablegram "Carhal, Washington." Having looked up the list of registered addresses, the Washington office of the telegraph company would write out the address in full, "John M. Carson, Chief of the Bureau of Manufactures, Department of Commerce and Labor, Washington, D. C.," and sign it "Carhal," so that with this signature and Birmingham in the date line, Major Carson would know hat it came from the consul at Birmingham.

If on the same day a traveling representative of the Department of Commerce and Labor was calling here in Birmingham, and he had with

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the Chief of the Bureau of Manufactures, or the Secretary of the Department of Commerce and Labor, a reversible registration, say the word "travcomlab," and if desiring to communicate with his Department he cabled from Birmingham, the recipient in Washington, without the sender having to pay for the signature, would know it came from the traveler of the Department of Commerce and Labor and not from the consul at Birmingham. In the same way each of the Departments in Washington having relations with the consul in Birmingham could have a reversible registration, and without the Departments paying for signatures the consul could always know which Department sent him the cablegram. The application of this to American business houses is apparent, but that our telegraph companies afford them this facility is not generally known, and, of course, though the telegraph companies make no charge for registering these addresses, they do not want to burden their registration books with the registrations of those who do not cable with some frequency.

AUTHORIZED ABBREVIATIONS.

The abbreviations on the back of the telegraph blank, to which allusion is made by Consul Halstead, and which are charged as one word, are as follows:

RP—[a]	Réponse payée	Telegram with reply paid.
TC	Télégramme collationné	Telegram to be repeated.
PC	Accusé de réception	Telegram the delivery of which has to be notified by telegraph.
PCP	Accusé de réception postal	Telegram the delivery of which has to be notified by post.
FS	Faire suivre	Telegram "to follow."
PR	Poste recommandée	Telegram to be posted as a registered letter.
XP or XP—[b]	Exprès payé	Charge for porterage prepaid.
XPT	Exprès payé télégraphe	Deposit for porterage paid with notification by telegraph.
XPP	Exprès payé lettre	Deposit for porterage paid with notification by post.
TR	Télégraphe restant	Telegram to be called for at a telegraph office.
GP	Poste restante	Telegram to be called for at a post-office.
GPR	Poste restante recommandée	Telegram to be called for at a post-office registered.
TM—[c]	Télégramme multiple	Telegram with multiple addresses.
J	Jour	Telegram not to be delivered during the night time.

SCARCITY OF APPLES FOR CIDER.

GOOD RESULTS FROM SCIENTIFIC EXPERIMENTS.

From report furnished by Consul Halstead, of Birmingham, it appears there is a likelihood of cider makers of Great Britain being forced to go abroad for their supply this year in consequence of a scarcity of cider apples. Mr. Halstead furnishes an interesting report on experiments that are being made by agricultural societies

[a] Number of words to be inserted here.
[b] Here insert amount paid (for example "XP 2s. 6d.").
[c] Here insert number of addresses.

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in various counties to improve the quality of the cider apple and also the results of experiments made to improve the quality of cider. His report follows:

A representative cider maker is authority for the statement that the cider makers of Great Britain will have to buy a great quantity of cider apples abroad this year, and that some makers to meet the ordinary demands of their trade will need to supplement their own cider with foreign-made cider. In a report which I made a few years ago, when there was a shortage in cider owing to a small crop of apples, I stated that a cider maker, who wished to buy American cider, claimed that, while for many years Americans had better processes for refining cider, the English had adopted all that was good in the American processes, and had adapted some of them to the special requirements of Great Britain. The English cider consumer preferred, he said, a heavier bodied cider, and one of "better keeping qualities." The Birmingham Daily Post, in an article on scientific cider making, telling of some interesting experimental work in that line initiated by the Bath and West of England Agricultural Society, declares it is "remarkable that the making of cider, a beverage which was probably never more popular than at present, had never received more attention from the laboratory."

RESULTS OF EXPERIMENTS.

Rule-of-thumb methods prevailed in producing cider, hence it was not surprising that there should have been material differences in quality, color, flavor, etc., and that the blending of fruits had been regulated by individual discretion or taste. The experimental work of the Bath and West of England Agricultural Society received official recognition in the form of a sum of money annually allotted by the board of agriculture. From this sprang the National Fruit and Cider Institute, which has just completed its first year of working, and the results of whose investigations with regard to the cider-making industry justifies the belief that great benefit will accrue to those who care to accept its recommendations. The institute has an annual grant of $1,460 from the board of agriculture, $487 each from the county councils of Worcester, Hereford, Gloucester, and Somersetshire, $243 from the Monmouth County Council, and $487 from the Bath and West of England Society.

"Students in cider making," says the Post, "are given instruction at the institute, where there is a well-equipped laboratory which contains an American mill and press of special design. Experiments have been made with the six different kinds of apples growing in the six cider-making counties, with the object of definitely establishing for blending purposes the relative composition of the different kinds of apples, such as the amount of juice yielded by the same weights of the different varieties and their chemical compositions," especially in sugar, acid, and tannin, and the nature and rate of fermentation. In twelve months the institute has produced and investigated more than fifty distinct kinds of cider and perry (the cider of pears). The institute will also study the question of discoloration, believing that the blending of ciders having a tendency to discolor with those of a highly acid character will prove advantageous. The Bath and West of England

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Agricultural Society wishes the institute to study the diseases of fruits and fruit trees and the question of grafting, etc. In grafting there are in this country two opposed systems. In the Herefordshire system "the 'stocks' are budded or grafted close to the ground, so that in the adult tree the stem is a product of the growth of the bud or graft (i. e., of the desired variety). In the other system (the Somersetshire) the 'stock' is allowed to grow until the stem is about 6 feet in height and has produced a good head. It is then budded or grafted at the head with the desired variety, so that the stem is a product of the original stock. The effects of these different methods are to be investigated." Some farmers who have received instruction have so improved the quality of their ciders that they receive 8 cents to 24 cents per gallon higher price to-day.

DUST NUISANCE.

CAUSE OF OPPOSITION TO MOTOR CARS.

It appears that much of the opposition prevailing in England to motor cars is due to the quantity of dust they create while in motion. In consequence of this there has been some difficulty in renting houses located on roads used by these cars. On this subject Consul Halstead writes:

A private demonstration was recently given with a Spyker car, which had been especially designed with reference to the dust nuisance, and for comparison the Spyker and several other cars, both English and foreign, were driven down selected portions of a road, while photographs were taken to show how much dust each raised. The Autocar reports the road was of a sandy nature and its dust-producing qualities so great that when one of the cars was driven over it at a speed of 40 miles per hour the cloud of dust was so great that it was five minutes before the atmosphere was clear enough for the trial of the next car so that the photo could be taken.

A photo of the Spyker car when driven at 20 miles an hour over so dusty a road as that referred to indicates, according to the Autocar's photographic reproduction and report, that it "was as near dustless as possible," due "to the fact that the body is somewhat higher off the ground than usual, and that the protective metal apron gives a clear, smooth, clean run for the air passing beneath the car, and that the fly wheel being inclosed no vortex is set up thereby to disturb the dust lying upon the road. The exhaust also is discharged at a good elevation and through a fan-shaped orifice directly toward the rear of the car, where it is claimed it tends to destroy the vacuum caused immediately in the rear of the vehicle by its rapid passage through the air, and to which is due the rising of the dust from the road." The Autocar believes that this quality of dustlessness, having been proved a salient feature of the Spyker car, "it will be appreciated by those considerate people who feel more than perturbed when driving through the country and leaving a pillar of dust behind them, even when their pace is kept down below the legal speed limit," especially as it indorses their views expressed from time to time "with regard to the effect of attention to the clear run given to the atmosphere beneath a car." Another motor car paper believes that the Spyker car, having shown the way,

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and that there are advantages in even the small changes in design which are on that car, there will be much study given to the subject and great progress made soon toward the elimination of the dust nuisance.

METHODS UNSUITED TO AMERICAN ROADS.

Many experiments are being made in Great Britain with a composition designed to render roads dustless. One of the most successful seems to be a composition called "tarmac," a proprietary article. Tarmac is composed of crushed slag, which is thoroughly mixed with a tar preparation while hot and used for surfacing roads.

In a dispatch printed last year I reported that my observation of the state of the roads in this neighborhood after a period of dry weather, much longer in duration than often occurs in this country, had convinced me, much as I had always admired the smooth surface of English roads, that the method of making them would not be suitable for us owing to our climatic conditions. They were softer than I could have believed possible and very dusty. I did not venture to express an opinion I had, that the motor car is proving that the method employed for maintaining English roads, while it has been suitable for ordinary climatic conditions in England, does not produce results adequate to present English traffic conditions.

Macadam taught the road surveyors of England how to make good roads, and it seems to me the introduction of an attachment for a steam-driven road roller, which renders it easy to tear up the surface of roads, and the fact that the roads thus torn up can be easily ironed out again by the road roller, has led the English road surveyors away from a fundamental principal of macadamizing, that any binding material must be carefully selected from materials which have a really binding character.

The attachment to road rollers for tearing up roads consists simply of arms hung from the rear of the engine, these arms having affixed to each of them at the outer end a harrow light tooth or pick. The arms or levers being weighted, as the road roller, now used as a traction engine, moves forward the steel teeth tear up the surface of the road to a depth of several inches. A few men can follow the work of the engine and smooth the broken surface of a road, filling in ruts and cavities, and then on the top of this there is thrown whatever binding material a surveyor finds most convenient, and this having been thoroughly soaked with water the surface of the road is then ironed out again by the steam road roller.

The surveyors have, it would seem, grown less exacting since the road scarifier attachment has been used as to the quality of the material for binding.

FOREIGN SALES AGENTS.

BRITISH MANUFACTURERS OBJECT TO THEIR EMPLOYMENT.

Consul Halstead notes a significant movement on the part of British manufacturers in regard to the employment of foreigners for the sale of their products. This will doubtless interest American manufacturers at this time when earnest efforts are being made to extend the

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sale of American products in foreign countries. Mr. Halstead directs attention to an article in the Merchant and Shipper, an English magazine which has high standing in British commercial circles. The article follows:

In these columns we have often referred to the fallacy prevailing among many British manufacturers in appointing foreigners as their agents abroad in preference to men of their own nationality. Residence and travel in various parts of the world have demonstrated to us the folly of this practice, and yet our manufacturers will persist in appointing foreigners as their agents in preference to Englishmen, although our consuls and others interested in the development of British trade are constantly c lling attention to the folly of such methods. It certainly seems strange that while our manufacturers will not for one moment admit that the foreigner can beat them in their productions that they are ever ready to place their agencies in his hands even in our own colonies.

Attention is called to this fact once again in the recent report of the British consul at Lourenço Marquez, who, remarking on trade in the Transvaal, says that "the local and the Transvaal firms are naturally in a better position to tender for supplies, and the probability of British manufacturers obtaining their share of the orders must often depend upon the capability and energy of their representatives in South Africa. In connection with this it is rather noticeable that the agencies for many British manufactures are in the hands of foreigners. It is said that there is not much sentiment in business, but given only a slight margin between two articles there is probably sufficient sentiment to incline the agent to push the sale of those of his own country." This is undoubtedly true, and our own experience goes even further, for we have known many instances in which a foreigner, having obtained an English agency and found the goods selling well, has informed his own countrymen of the fact, with the result that German or other foreign imitations of these articles have been replacing those of the British manufacturer which his foreign agent was supposed to be pushing. It is high time our manufacturers bore these facts in mind.

CARELESS ADVERTISING.

A great deal of carelessness is shown by American business firms in the matter of advertising in foreign countries. It is believed that a careful preparation of announcements of advertisements briefly and intelligently explaining the commodities advertised would be highly serviceable. In this, as in all other matters connected with foreign trade, existing conditions and customs in the countries whose markets are sought should be given full consideration. On this point Consul Halstead says:

A certain American magazine is sold here, and judging from what the newsdealers in Birmingham tell me, it has a fair circulation. It carries its American advertisements in its English edition. They constitute one of the attractions which sell the magazine. These advertisements could be useful in developing American trade in Great Britain, but in every issue of this magazine there are a number of

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advertisements of American articles, the manufacturers of which have English agencies, and yet the advertisements do not have the addresses of the English agents. I feel certain that these addresses are not put in because the American manufacturers are not aware that their advertisements are carried in the English edition of the magazine in question.

BOOTS AND SHOES.

THE TRADE OF GREAT BRITAIN DECLINING.

Consul Hamm, of Hull, writes of the boot and shoe trade of Great Britain. He quotes a correspondent in a leading Yorkshire paper to the effect that the English boot and shoe trade is on the decline, and points out pertinently the important part played in England and on the continent of Europe by American shoes, attributing the falling off to that fact. He begins with a quotation from a correspondent of a leading Yorkshire paper, which says:

The manufacture of boots and shoe is now one of the most unprofitable and unsatisfactory of English industries, and the difficulties of the producer are steadily increasing. The present position has been caused by a variety of reasons over which the producer has had little control. Competition has of course played an important part, but that is the only point for which any responsibility rests upon the manufacturer. The method of making changed with remarkable rapidity a few years ago, and the introduction of mechanical appliances to supersede the old-fashioned hand-closed boot necessitated a large output if the machines were to pay their way. This has led to overproduction, and the market has been flooded with millions of pairs of cheap boots and shoes. But the bulk of the money which the public pay for their footwear is represented by the cost of raw material, viz, leather. The price of the latter has been steadily advancing for about four years, and it has now reached a point never known in the history of the trade. Compared with twelve months ago, the cost of all classes of leather has increased by fully 12½ per cent, which is an important item in the original expenditure of the now popular half-guinea boot. The increased competition among manufacturers caused a corresponding shading of profits which for a while was permissible in consequence of the saving effected in the make-up by machinery. But against the advance in the market values of leather manufacturers have been almost powerless. The burden has therefore been borne more or less patiently by the boot manufacturer until to-day he is one of the most embarrassed of traders. The English public were never more neatly shod than to-day, and boots are being sold cheaper than ever, although the cost of leather is now fully 50 per cent higher than, say, five years ago. Taste has also played an important part in bringing about the present situation. The boot manufacturer, too, complains that paterfamilias does not now spend so much as of old in "clothing" the foot. The consumption of boots and shoes is therefore, pro rata, much smaller than in the days of our forefathers. Besides all this there is the constant craze for something cheaper.

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POPULARITY OF AMERICAN MAKES.

The correspondent doubtless outlines the situation correctly, with the exception, perhaps, that he does not give sufficient weight to American competition. One of the most popular stores in Hull sells nothing but shoes made in America or on American models. They are shapely, comfortable, and durable. They range in price from 01 shillings 5 pence (about $2.50) to 16 shillings (about $4), and they compare favorably with the boots and shoes sold in America at the same prices. The basis of their popularity is contained in the following remark frequently heard from men and women: "I never wore a well-fitting, comfortable shoe until I put on one of American make." This is probably the main reason, and not the price of leather, why the boot and shoe trade in England is in an unsatisfactory condition. English boot and shoe manufacturers get their hides under a free-trade tariff. The American manufacturers pay a duty of from 15 to 35 per cent on their imported material. And yet the latter are underselling the former and getting possession of the world's markets.

LONDON REAL ESTATE.

LAND VALUES HAVE REACHED THE LIMIT.

Consul-General Wynne, of London, sends a clipping from the London Express which deals with land values of the British capital. After calling attention to the fact that New York prices are run up with the high buildings and to the absence of tall buildings in London, the Express says:

Competent authorities are of the opinion that London's land values have reached their limit. Every year sees more and more of the large manufactories, which have been occupying valuable land actually in London, removed to the provinces or to convenient points on the fringe of the metropolis. It is, indeed, predicted that at a time in the near future London proper will be entirely a city of offices. As to the present value of land in London, it is, and always has been, at its maximum round the Bank of England, where a freehold site has sold at the rate of £3,250,000 per acre, or £75 per square foot. Yet there are no exceptionally high buildings anywhere in that vicinity.

HIGH VALUES AND HIGH RENTS.

High land values are not confined to the center of the city. In Bond street land has sold at the rate of £35 per square foot, or more than £1,500,000 per acre, and at Charing Cross plots fronting to Trafalgar square have a capital value of £800,000 to £1,000,000 per acre. In the Strand plots of land have sold at prices ranging from £12 to £20 per square foot, or from £500,000 to £870,000 per acre. Rentals are a sure index to the value of land, and in the Strand a firm of outfitters pay a rent of £800 a year, while a Cheapside bootmaker pays £1,200 a year for a ground-floor shop and basement. The enormous increase in the value of London's land during the last thirty years provides some almost startling figures. During that period the rental value of the land has increased by £10,000,000 and the cap-

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ital value by £250,000,000. The present value of the whole of the land in London is about £418,000,000, Thirty years ago it was about £168,000,000. The increase in value is therefore at the rate of 150 per cent.

THE INCREASE GENERAL.

In the same period the rates have increased in the same proportion; that is, from £4,000,000 to £10,000,000 per annum. A striking feature of this great increase in the value of land is that it is common to the whole metropolitan area. Districts where one might look last for greatly increased values have seen tremendous advances. In the suburbs of London land values have shown similar remarkable increases during recent years. Land at Wimbledon has risen in value from £600 to £2,000 per acre during the past fifteen years, while at Ilford in half that period the value per acre has increased from £800 to £1,200. An estate of 7¼ acres bought in 1896 for £3,500 was sold seven years later for £9,600, or a price of £1,280 per acre.

NEW SYSTEM FOR RECORDING EMIGRANTS.

Consul Stephens, of Plymouth, reports that a new return has just been issued for the first time by the British Government. It is the counterpart of the alien immigration returns, and deals with the number of passengers who leave England for places out of Europe, discriminating between the British Empire and foreign countries. It appears that in the month of July, 21,000 Britons emigrated, two-thirds being from England, 4,392 from Scotland, and 2,631 from Ireland. That is a reduction of 1,664 as compared with the corresponding month of last year. As regards the past seven months, British emigrants numbered about 151,000, an increase of 13,447. England contributed 98,460, Scotland 24,116, and Ireland 28,333.

Of British and Scotch emigrants, rather more than one half go to British colonies, and Canada takes by far the greatest proportion of them. The Irish, however, prefer the United States, with the result that the Republic gets more of British people than Canada. It is claimed that the English and Scotch are far more partial to the Dominion than to the United States, and sent 55,000 emigrants there as against 2,000 Irish in the 7 months. South Africa holds the next place in popularity, and has taken nearly 13,000 Britons in the 7 months, while Australia attracted 6,325. The returns also show that 110,000 foreigners left the United Kingdom, chiefly for the United States, in the past 7 months.

SCARCITY OF JAM.

The London Mail says that, as the result of a generally short fruit crop, this season's jams will be sold at an increase of 1 or 1½ cents a pound. The three great jam fruits, strawberries, raspberries, and black currants, have all been partial failures from the boilers' point of view. Owing to the extreme heat and the lack of rain during the strawberry season, the latter crop, which is the one used by jam makers, was very meager, and the manufacturers had to pay enhanced rates for their supplies. This jam will be advanced 1½ cents a pound. Similar atmospherical conditions also reduced the bulk of the raspberry

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crop. The fruit, which was plentiful at first, when the price was too high for jam making, became scarce when under normal conditions it should have been cheap and plentiful. Black currants, too, have been scarce. The latest price quoted to jam manufacturers is $9.25 per hundredweight, or about $2.67 more than last season. The public will have to pay 1 cent a pound more for this jam. In most parts of the country the plum crop is also poor.

COMMERCIAL EDUCATION.

According to the Commercal Intelligencer, a leading British trade paper, commercial education is growing rapidly in public favor in England. It says:

There is a growing public opinion in favor of a more practical type of education for young people who will be employed in trade and commerce. The results in connection with the commercial and craft examinations of the national union of teachers, which took place in April and May last, afford evidence that these examinations have been received with much approval. Nearly 7,000 candidates entered for the various subjects, examinations being held in England, Scotland, Ireland, India, and on the Continent. There was a remarkable increase in the number of entries at the metropolitan and Indian centers. A large number of candidates attempted the full course for a commercial or craft diploma, showing that the opportunity of taking a complete educational course having direct reference to the future work of the student, has met with general appreciation. As last year, the most popular subjects were bookkeeping, shorthand, French, arithmetic, and typewriting. The entries for commercial correspondence showed the greatest proportional increase. Of the six subjects which were added to the syllabus last year, those which attracted the largest number of candidates were theory and practice of commerce and workshop arithmetic. There was a considerable increase in the number of candidates taking the oral examinations in modern languages, the progressive character of the syllabuses being much appreciated.

IRELAND.

COMMERCE AND TONNAGE OF DUBLIN.

Consul Moe furnishes the following report on the commerce of Dublin, and improvements in progress in the harbor:

The total registered tonnage that entered the port of Dublin during the year 1904 was nearly 2,000,000 tons, but over 41,000 tons less than in the previous twelve months. Sailing vessels generally increased. For instance, the registered tonnage from continental ports went down by 13,771 tons, steamers by 29,812 tons, but sailing vessels rose by 16,041 tons. Again, while in the coasting and cross-channel trade steamers decreased by 26,267 tons, sailing vessels were better by over 2,000 tons. Of the sailing craft the colliers alone showed a decrease. The receipts from the tonnage dues were necessarily less than in 1903; in the aggregate they amounted, exclusive of net rates, to £59,407

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($289,312.09), the net rates were £8,868 ($43,187.16), and the rates in respect of goods, £7,795 ($37,961.65).

Economy, consistent with efficiency, has been practiced by the members of the dock board. Many needed improvements have been carried out in recent years in the face of not a few difficulties, and the port has been well maintained. In the matter of the dredge works, last year about 669,000 tons were dredged for the improvement of the harbor and about 133,000 tons for maintenance of the harbor, the combined work costing over $77,920. The reconstruction of the north quay wall was pushed on at a cost of $54,753, and on the north extension $19,514 was expended. The deep-water jetty at the east wall was continued, a new light-house was erected upon the eastern breakwater, and the old wooden light-house at the end of the north wall extension, which was destroyed two years ago, was replaced by a new steel tower structure. Substantial sums were also spent on the construction of the outer wall and on the graving dock and graving slip.

The falling off in the trade of the port, which seems to be on a steady wane, is unaccountable, but it is hoped that the present year will show an improvement justified by the extensive improvements along the river and sea front.

When the north wall extension has been carried out, and the other extensive works toward the bay and shore, the city will have a fine harbor, with accommodation for as much shipping and as big sized vessels as are likely to use it.

IMPORTS AND EXPORTS ANALYZED.

With regard to the figures of imports and exports the Irish Times remarks: "Some of the figures of the imports and exports at the port are interesting. One set, we think, is clearly demonstrative of the necessity for the reafforestation of our island. Of timber we imported no less than 37,818 tons; no doubt we exported 36,868 tons, and it is very likely that the imports included classes which could not be successfully grown in Ireland, but they must have included a considerable quantity that could. Of books we had an appetite for 280 tons, and the foreigner took away 152 tons of ours. Our imports of coal—the biggest item in the entire list, running into the millions—went up 10,000 tons. No less than 19,000 tons of building bricks were unloaded, while we exported only 37 tons. We asked our neighbors to give us 19,820 tons of ale and beer, and they were content with 456 tons from us. A very extraordinary figure is that opposite bacon. The imports were 20,784 tons and the exports only 6,779 tons. We know, of course, that the export of bacon from other Irish ports is very large, but in a great pig-raising country this disparity in the figures for the metropolitan port is somewhat strange. However, our own may have come back to us again, for we only imported 6 tons of pigs, and we sent our friends over the water 264,045 tons of them. But why is it these could not have been turned into bacon at home? Our exports of sheep were also enormously in excess of the imports. We shipped more than 370,000 tons of them and of cattle more than 292,000 tons. Only for these features the return would be one continuous tale of imports ahead of exports."

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NATIONAL TEACHERS.

The commissioners of national education have published a return as to the position of Irish national teachers. It appears that during the three years, 1897–1899, preceding the introduction of the new financial arrangements, the following first appointments were made after the completion of a two years' course of training:

Principals, male, 162; female, 162; assistants, male, 229; female, 184. The salaries paid out of imperial funds were $353 and $257 as regards principals, $275 and $215 as regards assistants. During the three years, 1901–1903, succeeding the new financial arrangements the appointments were: Principals, male, 226; female, 305; assistants, male, 258; female, 242. The average total salaries out of imperial funds are set out as follows, respectively, $308, $247, $291, and $229.

In 1902 there were established in Ireland 8,712 national schools, for which there was a parliamentary appropriation of $490,685. The average daily attendance for that year was 487,098 and the total enrollment 737,086, which would make a percentage attendance of 66. In the model schools there were enrolled 8,690, and in the workhouse schools 4,450.

The number of schools and pupils in the four provinces is given herewith: Leinster, 1,802 schools, 161,639 pupils; Munster, 2,116 schools, 185,151 pupils; Ulster, 3,263 schools, 268,329 pupils; Connaught, 1,531 schools, 121,967 pupils.

On December 31, 1902, the national board had in service 8,253 principal teachers and 3,724 assistants, making in all 11,977.

Under the new regulations for evening schools grants were made in 1902 to 1,036 schools. Prior to the publication of the new rules there were only 21 of these schools in the whole of Ireland. The pupils are, as a rule. over 14 years of age and include many adults.

TESTS OF IRISH PROSPERITY.

Those who have studied the state of the money market during the past half year probably anticipated a falling off in its reflex—the banker's profit. In Ireland the usual dividends have been maintained by the leading banks. While the custom has generally prevailed of arguing a state of prosperity for the country when the bank returns show increased deposits, in Ireland, at least, this does not hold good. The money that should be invested in agricultural and industrial enterprises is in periods of commercial depression timidly lodged in the banks, and either lent out at high interest to farmers and manufacturers or more profitably invested abroad. A much better test of the financial condition of the country is furnished from the reports of the great commercial undertakings, such as the street railway and steam railway companies. When, as at present, these bodies are able to keep up the usual dividends and balances, then the localities where these are situated may congratulate themselves, with some show of reason, that the financial condition of the country is not declining. Especially is this condition true of Dublin, where not only the banks and other large corporate bodies have declared large dividends, but the tramway and railway organizations as well. Nearly all of these have declared a semiannual dividend of 6 per cent, which needs no comment on the business abilities of the various boards of directors.

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REPORTED MERGER OF BREWERIES.

It is rumored that the two great firms of Allsopp and Inde, Coope & Co. contemplate amalgamation. It is assumed that this step has been suggested with a view to effecting working economies. Provided the shareholders can agree to the financial arrangements of the merger, which are not at present made public, there is no doubt that such a combination will be to the material advantage of both concerns, as it will readily reduce the enormous working expenses under the present system. In the event of the merger it is contemplated to brew the cheaper beers of both companies, especially those intended for the London market, at Romford, while at Burton the breweries of the bitter beers will be concentrated in Allsopp's extensive premises, and the Inde Coope Brewery closed. The change will affect a large number of workmen, particularly in the latter town. Recently, in Dublin, the Anchor Brewery (D'Arcy & Son) merged with the Phœnix Brewery, under the management of the D'Arcy Company.

TRAMWAY NOT WANTED IN LIMERICK.

The Limerick corporation, at a special meeting held to consider the project of a street railway line, voted to reject the system because of popular opposition. On the evening of the meeting bands paraded the streets and played outside the council chamber to emphasize the opposition of the working community, and especially the cab drivers, to the undertaking. The counsel for the Great Southern and Western Railway Company also appeared to object on the part of his company to the proposal. The solicitor for the promoters agreed to drop the haulage portion, but asked that a committee be appointed to investigate the details, and in the event of the haulage scheme not being found agreeable, to go at least into the passenger proposal. On final vote, however, the entire scheme, both passenger and haulage, was rejected.

The population of Limerick by the census of 1901 was 38,000 and of the parliamentary borough 46,000. The distance roughly from end to end of the city is 2 miles. To traverse this length one must either walk or pay a generous cab fare.

WALES.

DECLINE IN THE NUMBER OF SHEEP.

Consul D. W. Williams, of Cardiff, furnishes an interesting and instructive report on sheep. He directs attention to a serious decline in the number, gives tables, and concludes that there is an excellent chance for American farmers to increase the export of sheep to Great Britain. He says:

The world is eating up its sheep. Its flocks have been declining for three decades, and that decline has become perceptible in so many countries that it is regarded as the most remarkable agricultural movement of our times. A number of independent causes have cooperated to bring about this result. The first to be noted is the modern

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method of studying Hebrew history and literature. This has brought to light the fact of the preponderance of mutton in the meat diet of the Hebrews from the earliest times, a preponderance that accounts in part for the character of their civilization, and their persistence as a race. The dread of tuberculosis and pleuro-pneumonia in some countries, and of trichina in others, has led to the substitution of mutton for other meats by several classes, especially those influenced by the lurid accounts in the sensational press. The high price of beef in recent years has forced many others to make a like substitution. But the principal cause of the decline of sheep has been the movement of the agricultural population to the industrial centers in the towns and cities. This class, with an already acquired taste for mutton, is able to gratify that liking to a greater degree in the town than in the country, both on account of the better opportunity offered by the open market, and the increase of its purchasing capacity by the higher wages paid in the towns.

LOSSES BY COUNTRIES.

These and other causes have operated everywhere, and the decline of flocks has been marked, except in countries where agriculture engrosses the attention of the people. To appreciate this, it is only necessary to study the following table, compiled from the annual report of the British board of agriculture for 1904. The first column shows the greatest number of sheep in any recent year and the second column the last report from each country, the years varying from 1898 to 1904:

Country.	Highest report.	Last report.
Algeria	9,502,046	8,053,758
Austria	5,026,398	2,621,026
Belgium	586,485	235,722
Denmark	1,548,613	876,830
France	22,616,547	17,954,230
Germany	24,999,406	9,692,501
Holland	819,300	654,300
Hungary	15,076,997	8,122,681
Italy (estimated)	8,596,108	6,900,000
Roumania	6,847,825	5,655,444
Russia	51,822,238	45,497,621
Caucasia	9,033,175	7,705,791
Poland	3,754,665	1,998,054
Siberia	11,366,600	9,192,242
Servia	3,094,206	3,013,644
Switzerland	367,549	219,438
Sweden	1,457,462	1,167,473
Norway	1,686,306	998,819
Uruguay	18,608,717	17,624,548
British Empire:		
United Kingdom	30,829,889	29,105,109
India	18,559,957	17,642,671
New South Wales	47,617,687	28,656,501
Victoria	12,692,843	10,841,790
Queensland	19,856,959	8,392,044
South Australia	7,004,642	5,298,720
West Australia	2,704,880	2,600,633
Tasmania	1,792,481	1,597,053
Canada	2,563,781	2,510,239
New Zealand	20,342,727	18,280,806
Cape of Good Hope	15,646,486	12,639,992
Ceylon	91,316	89,604
Cyprus	313,368	215,280
Falkland Islands	779,911	681,209

The losses in some of these countries have continued for a generation. For instance, the first report for Germany is that of 1873, and its flocks have declined steadily ever since, the total decline to the end of 1904 being over 60 per cent. Austria-Hungary's flocks have

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declined nearly 45 per cent since 1869, those of France 30 per cent since 1873, and those of the United Kingdom 15 per cent in the same period. The decline in the latter country has been retarded by the heavy annual importations, both of mutton and live sheep. For instance, the importations for 1904 were as follows: Mutton, 3,530,659 hundredweight; sheep, 382,240 head. And yet the decline of sheep in the same year amounted to 432,619 head.

RETURNS FROM BREEDING COUNTRIES.

The following table shows the last return from the several countries named:

Country.	Year.	Sheep.
Argentina	1895	74,379,562
Bulgaria	1893	6,868,291
Mexico	1902	3,424,430
Spain	1891	13,359,473
Natal	1903	619,302
Jamaica	1903	18,630
Malta	1903	17,184
Orange River Colony	1903	1,088,364
Transvaal (estimated)	1903	200,000

No comparison can be made for Bulgaria, Mexico, Spain, and the Orange River Colony, because only one report is available. Natal, Jamaica, Malta, and Transvaal show an increase of 181,357 head compared with former reports. Argentina shows an apparent increase of 7,500,000 sheep when the report of 1895 is compared with that for 1888, but inasmuch as its wool exports showed a falling off of 28,000,000 pounds in 1904 compared with 1901, it is highly probable that its flocks also have declined since 1895. At any rate it is safe to estimate that the gains and losses in this miscellaneous list will balance.

OPPORTUNITY OF THE AMERICAN FARMER.

The figures quoted indicate that the flocks of the world have declined at least 93,000,000 head since 1873, an average of more than 3,000,000 head a year. This decline, which must continue while present conditions prevail, is the opportunity of the American farmer, but he has not yet awakened to the fact. America's share of the British trade in 1904 was as follows:

	From the United States.	Total imports.
Sheep.....number..	294,804	382,240
Mutton.....hundredweights..	7,420	3,530,659
Wool.....pounds..	1,067,650	314,468,016

The American farmer secured the bulk of the sheep trade, but he was not a factor in the mutton market, and he furnished only three-tenths per cent of the wool imports. The latter articles were furnished largely by Argentina, Australia, and New Zealand. It would appear that there will be more money in sheep for years to come than in any other agricultural product, and the American farmer will doubtless find it profitable to devote more attention to this domestic animal.

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COAL IN FOREIGN MARKETS.

SUPERIORITY OF WELSH COAL FOR STEAMING.

According to the London Times, Welsh steam coal is in great demand both at home and abroad. The Times says:

Welsh coal is used principally for naval and manufacturing purposes. Its superior calorific power, combined with its weathering capabilities, have given it a peculiar advantage over other coals for the use of mercantile steamships, and it is mainly in virtue of this advantage that the steam coal of South Wales has now for about twenty-five years occupied its unique position at the various coaling depots along the trade routes of the world. Last year the quantity of coal exported from Cardiff was 14,920,610 tons, and from all the South Wales ports over 21,000,000 tons, or just half the total coal export trade of the whole of the country. In France and Italy the railways as well as the steamship lines are large consumers, but the following figures will give an idea of the extent to which Cardiff coal is shipped to the depots where mercantile steamships and war ships call in order to refill their bunkers.

The nearest and by far the greatest market is in the Mediterranean, and the following were the exports from Cardiff in 1904 to some of the ports on the French, Italian, and Egyptian coasts: Alexandria, 503,000 tons; Bordeaux, 285,000 tons; Constantinople, 136,000 tons; Genoa, 970,000 tons; Gibraltar, 189,826 tons; Marseille, 331,157 tons; Malta, 342,106 tons; and Port Said, 1,114,086 tons. To Madeira and the Canary Islands the exports amounted to over 600,000 tons; to Aden, 167,000 tons; to Cape Town, 317,000 tons; to Colombo, 280,000 tons; to the Philippines, 57,000 tons; to Hongkong, 582,596 tons; to Singapore, 113,000 tons; to Shanghai, 141,000 tons; and over 1,200,000 tons went to Uruguay and the Argentine Republic. Other depots might have been mentioned, but these figures, though in a few cases of an exceptional character, suffice to show how largely supplied is the world's mercantile marine with the "black diamonds" of the South Wales coal field, and incidentally to explain how it is that Cardiff clears more tonnage for foreign trade than any other port in the world.

The question of how long Wales will be able to continue in her present position as the main source of the world's supply of this peculiarly valuable kind of coal is agitating the minds of Welsh colliers. India, Japan, Australia, the United States, and other countries are not only securing sufficient coal for their own fires at home, but are beginning to export to places hitherto entirely or almost entirely supplied by Wales.

BRITISH advices put the number of working days lost by strikers in the United Kingdom last year below any on record. There were fewer and smaller disputes than ever before. Less than 1 per cent of the industrial population participated in strikes. Even these lost 1,450,000 days, but that was small compared with 3,125,000 for each of the four previous years.

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GERMANY.

TYPEWRITING MACHINES.

BAD METHODS OF MANUFACTURERS, AGENTS, AND SALESMEN.

Mr. Robert Grimshaw, a well-known American gentleman residing in Germany for some time, furnishes the Bureau of Manufacturers, through Consul-General Mason, who until recently was at Berlin, the following report in connection with efforts that have been made from time to time to introduce American typewriting machines into Germany. A careful perusal of Mr. Grimshaw's report will furnish American manufacturers and others interested in the sale of typewriting machines in foreign countries with valuable hints. His report follows:

The introduction of typewriting machines (American and other) in Europe is much handicapped by several things, on the removal of which manufacturers must insist if they expect a rapid increase and permanent extension of the business. There are three parties to be considered in this connection—the manufacturer, the dealer or agent, and the customer. Unless the conditions are favorable to all three, the sale and use of a machine will be handicapped. The principal cause of nonsuccess, or half success, is that the local agents do not usually understand their business. They have in many cases hardly ever seen a typewriting machine or good samples of its work. They accept an agency and lay in a stock of machines and supplies without knowing how to adjust or even operate the machines, or having anyone who does know. They "break in" a cheap clerk so that he can finger the keys somewhat rapidly, and then proceed to advertise the machine or to canvass therefor, and at the same time to "make one hand wash the other," they advertise to do copying. What copying they get to do with unskilled labor is no good advertisement of the machine on which it is done, and no "missionary" for typewriting in general. When the machines get out of line or in other ways out of order, they do not know how to repair them. If they can not repair or even adjust their own machines, how can they keep in order their customers', much less show the latter how to do it? Such agents send out young girls as competent to do all kinds of work, when their own teachers themselves can not do it. Customers find that such so-called "typewriters" take longer to deliver a certain number of pages than pen writers would require. The sheets are full of corrections, alterations, and smut marks, the lines are askew and unequally spaced, the letters out of line, the impression unequal, and the whole thing lacking in both style and legibility. Some of the "operators" can not manifold, others can not write on narrow paper, postal cards, or envelopes; a simple "box" is beyond them, and many of them can not spell, much less write, German correctly. How can such a raw girl replace a smart corresponding clerk who has spent two years in England and two in France learning English and French and the various corresponding styles, and who writes a hand like copper plate?

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INEFFICIENCY OF OPERATORS.

A dealer in a prominent German city, handling a certain machine, one of the "brag" points of which is that it will "take in" paper of any width, did not know that fact, and I had to prove it to him before he would take a piece of wide work which I offered him, and which called for lines of ordinary length, but on paper 10 inches wide. The instruction given at most of the agencies—where any is given—is of the most primitive and insufficient sort. For a stipulated sum the learner is privileged to sit daily in the office and tap away on a machine, copying from letters referring to giant transactions. From time to time the so-called teacher comes around and informs the learner (pupil is a wrong word in this connection) that he or she is making progress. Nothing is said about style in getting up letters of different length and tenor; manifolds are not spoken of, because carbon paper is too dear; postal cards and envelopes are not down in the scheme; and as to theatrical or legal work, they are seldom or never heard of. The learner is not taught to oil and adjust the machine, much less to make slight repairs. Too frequently the grossest mistakes are let go uncorrected. I asked an enterprising and broad-minded local agent why he could not send me a girl who could write decent grammatical German, or even spell it infallibly, and he replied that unfortunately the social system would not permit it; the daughters of the educated classes came very seldom to do such work, because the treatment of young girls in offices was hardly what would be desirable; and further, the daughters of officers and the "Beamten" class would rather stay at home and make embroidery to be sold in secret, or visit around among relatives, or go out "au pair" in respectable private households, than "go to work" in the ordinary sense and thereby "lower the family pride."

HURRIED VISITS OF AGENTS.

Some of the American traveling machine agents spend their time in going about inducing local dealers to talk up their machines in addition to those already handled. The result is that neither kind is properly pushed, unless, indeed, the local dealer "shelves" one machine, the sole agency for which he has only taken up in order to get rid of a rival. These hurried agents' visits do no permanent or even temporary good. The agents leave a lot of handsome signs (in English), some of which are shelved, while the displayed ones, not being in the language of the country, are of little or no use. In many cases supplies and repair pieces are almost impossible to obtain. The customer can not always wait for a repair piece or a necessary or desirable supply from some general agency; still less can he do without the machine for a week or more while it is being repaired at such general agency, and pay the express charges in both directions.

IMPORTANCE OF GERMAN CHARACTERS.

Sufficient judgment is not exercised by some manufacturers as to the key board. The German language requires not merely different characters from those necessary to write English, but the arrangement of those letters and signs which are common to both languages should be such as to facilitate in writing the most usual German

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combinations and sequences. Even in the matter of the form of the characters, those who have gone thoroughly over the ground here know that the Germans prefer as a rule the style of type which our printers know as "italic;" yet how many travelers coming over here to introduce a new make of machine or go over the field covered by an old one, have ever thought to ask what style of character would take best. There are also proportionately more nearsighted Germans than myopic Americans; and this would call for opening the market with machines having large characters.

BAD MANAGEMENT OF AGENTS.

Some agencies which are intrusted with the exclusive sale of important machines are open only at certain hours of the day. At other times—and these are the usual hours during which business men are to be found in their offices—there is no one there to sell supplies or to answer inquiries. The agent is out canvassing. This would be bad enough if he confined his canvassing to the machine in question, but he usually has so many side lines in the shape of office furniture and supplies that the machine does not get enough benefit from such outside canvassing to pay up for the fact that the office is shut at those times when consumers call who want an extra ribbon, or an intending customer happens along who has taken an hour off to look into the typewriter question or who wants an operator. In one case, in my personal knowledge, the agent is a very hard worker and goes off for a day or so at a time canvassing the neighboring towns, while his local customers can whistle for supplies.

The American manufacturer is often bound down to a cast-iron contract, by which he gives the European dealer or agent sole representative rights, while the latter does not bind himself to handle only the machines covered by the contract, or even not to sell rival machines. In some cases the dealer gives the foreign machine another name than that by which it is known in the country of its production, and where the name of the machine is a good selling point that of the manufacturing firm is never mentioned. Sometimes an American machine is sold as German—or at any rate European—in origin. (Curiously enough, some cheap inferior machines are sold, at any rate under implication, as American, which never saw America.)

WHAT SHOULD BE DONE.

The prejudice against the use of the machine is waning, but has not entirely disappeared; and it is not long since the courts permitted the use of loose-sheet carbon duplicates of letters, arranged alphabetically, instead of the successively paged, bound, letter-copy books which the strict text of the law still requires. Loose-leaf ledgers are not admissible in court as evidence, although as a matter of fact no ledger should be considered as evidence in any court, not being an original book of entry. The next time an agent comes over he will do well to pick out a town that has good business connections and a good deal of correspondence, and stay there until he has educated his local agent and at least two good operators, whom he must bind the agent to keep as teachers. When one town is filled out with "evangelists" then the traveling man must see that the agent has not a bigger terri-

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tory than he can and will cover by starting local subagencies in the same manner, then another field may be taken up and thoroughly "cultivated." As things now are it is no wonder that the Germans do not "take to" typewriting machines, and particularly imported ones.

VALUE OF PATENTS.

THEIR NECESSITY AND HOW SECURED.

Through the same channel Mr. Grimshaw also furnished the Bureau of Manufactures with a report on the value of patent rights in Germany and the methods that should be followed to secure them. On this subject he writes:

I have often had occasion to write American manufacturers and exporters on the subject of having what they have to sell in Europe patented in the countries where they wish to sell them, and in some cases what I have to say has taken effect. But I should be glad of an opportunity to say, for the benefit of manufacturers as a class and for that of American export trade as a whole, some of the things that I have said from time to time to individuals. From the point of view of the manufacturer, patenting is desirable, because it prevents the foreigner from doing what he has otherwise every legal right to do at any time that he sees that a foreign invention is meeting with success, and possibly success at his expense, in that it is being sold in his territory and supplanting his own products, viz, make and use of it.

From the point of view of the selling agent in Europe, who is asked to spend time and money doing missionary work, the desirability of patenting the new thing is evident from the first, and the conviction strengthens with the success of the agent in the unprotected territory. For the manufacturer has at least the protection of home patents, and if through leaving himself unprotected he loses his foreign fields, he has at least his own country to work in with no one to say him nay. But the selling agent abroad, who has put in hard work to convince a very conservative public of the superiority of the new thing (a task which is none of the lightest, especially if there is a marked difference in first cost against the novelty) is cut out completely. This digging wells half down to water is seldom relished even by the most philosophic and philanthropic of agents.

PENALTIES FOR INFRINGEMENT.

But when we consider the question solely from these two standpoints we have still by no means got a full view thereof. There is the customer to consider. He does not want to buy a lawsuit with a machine or other purchase. In case the article to be sold is not patented in the country in which it is offered for sale there is the danger that it has already been patented by another, and that the patentee will very justly bring against the purchaser an action for infringement of his chartered rights. In this danger the resident agent—the missionary—participates. It is useless to assure the customer that the manufacturer is one of the largest concerns in his native country, and will protect the purchaser against any possible suits for infringement. In the first place the customer has no means of verifying the statement

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about the financial weight of the manufacturer, and in the second he does not care; he does not wish to be annoyed by any suits, no matter how heavily he may be backed up. In the third place, if he knows anything about German patent law, and the case is a German one, he will quietly remind the missionary that in that country the infringement of a patent is not merely a civil but a criminal offense; and no manufacturer in America, however influential in financial circles, can get around that part of the difficulty. Section 36 of the German patent law of April 7, 1891, says: "Whoever knowingly uses an invention contrary to the ordinances in sections 4 and 5 will be punished with a fine of 5,000 marks or with imprisonment not to exceed one year." The quoted sections 4 and 5 are those which secure to the inventor the sole rights of the invention which he patents.

CONVEYING FALSE IMPRESSIONS.

Further, there are many manufacturers who seek to convey to their agents and to the customers the impression that the matter is patented in the country of sale, not by directly saying so but by implication. Sometimes this implication is only one of silence; but for all that the attempt, whether unlawful or not, is dangerous in most countries, and especially in Germany. For section 40 of the law, already quoted, says distinctly that whoever marks objects or their packages with any sign calculated to impress one falsely with the idea that the object is patented according to the German law shall pay a fine of 1,000 marks. I had been for months in correspondence with the European general agency of an American manufacturer. To get a definite answer, or even any answer at all as to patents, was next to impossible. At last, however, I got the following: "Our friends, the ——— Co., apologize for the delay in answering our letters about patents, which they say has occurred through oversight. They write: 'As you may be aware, probably we have a great number of persons applying for patents in our own and foreign countries, and to possess you of definite information concerning them would be rather a difficult matter. It will, however, suffice and be entirely satisfactory to you to say that we will fully protect our customers against damages resulting from any lawsuits brought against them by reason of the use of our devices.'"

The foregoing is not to be commended. I have not the slightest doubt that I can get from the Remington typewriter people, or from the Westinghouse concerns, or from the McCormick establishments, within fifteen minutes after application to the proper head of department, the number and date of every patent owned or controlled by the concern in question in any country in the world where they are protected. If anyone does not believe it let him try a little bit of infringement, and call at the office of the company in question to discuss the matter in person.

GERMAN COLONIES.

PAST POLICIES HAVE NOT BEEN SUCCESSFUL.

According to the London Times, Germany never took kindly to the colonial policies of her statesmen. She has 2,600,000 square miles of territory, with 12,399,000 natives under her colonial governors. The white population is said to be 12,547, exclusive of troops sent out to quell rebellions. Of these 12,547, 7,945 are Germans.

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In recent years trading companies have been established to facilitate trade. Fully $75,000,000 have been put into these companies, many of which have gone in earnestly, energetically, and intelligently to make the most of the Empire's colonies. Quite a number in West and South Africa have turned their attention to the cultivation of cotton. Skilled teachers were sent from the Empire and cotton-growing experts taken from other countries to aid in cultivating cotton according to the best plans. Experimental stations have been established, markets opened, roads built, etc.

TRADE AND POLICIES.

Full trade reports for the German colonies are not available, but excellent estimates put their imports at about $10,000,000 for 1903, of which those in Africa took about five-sixths and the South Sea colonies one-sixth. The exports amounted to $6,284,500, of which Africa sent out $5,313,250, the South Sea colonies the rest. The rate of increase in all the colonies has been steady, although not very great, indicated by a total of imports and exports in 1898 of $11,648,750 and $16,683,500 in 1903.

In the past much was permitted in the policies dealing with the colonies that is rapidly giving place to better ideas. Then again, the climate has been a great hindrance to white settlers, for it was often found that where the climate was bearable to whites nothing would grow, and where everything grew luxuriantly white men could not live. At present the state of affairs is not only better than it was, but it gives great promise. Railroads are being built, post-offices opened, and roads cut, improved, and made secure.

COLONIES ARE EXPENSIVE.

In spite of every effort it is hard to find anything encouraging in the past of the Empire's colonial undertakings. All are costly, taking nearly $10,000,000 a year from the imperial treasury. "It is significant," says the Times, "of the importance of Kiau-chau that so large a share of the total of imperial expenditure on the colonies should fall to that port and its Hinterland alone." This is easy to understand when one thinks of the vast possibilities opening up to the industrial world by the resources of the East. China is enormously rich in coal, iron, cotton, etc. Nobody knows this better, if as well, than the Germans. Shantung, behind Kiau-chau, and Shansi behind Shantung, are among the Empire's richest coal regions.

Another interesting fact is the forceful support given the Government by the numerous voluntary organizations that make colonial propaganda in the Empire and among the German clubs, societies, etc., in foreign parts. One of these, the German Colonial Society, has 32,000 members. Besides this, there are many others, almost, if not quite, equal in importance. There is a colonial school, with departments for agriculture, horticulture, handicrafts, and domestic economy.

FAVORED FREIGHT RATES.

GERMAN-BELGIUM RAILWAY ARRANGEMENT.

Consul-General Guenther, of Frankfort, transmits a report in regard to most favored freight rates, which, in effect, are discriminating rates to those who are not in the favored class. The consul-general explains that the supplementary article in the commercial

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treaty between Germany and Belgium provides that no difference shall be made on railroads as to transportation rates or the time and treatment of the inhabitants of the territory of either of the contracting parties who agree to assist each other in establishing railroad transportation rates, especially for the goods of one country destined for points outside of it where there is actual traffic in such goods and through rates are asked for. The supplementary article also provides that articles subject to customs duties, if brought into either contracting party's territory as samples, shall be free of all ingress or egress charges, provided they are not sold within a specified time or are returned and their identity as the original samples is established. Consul-General Guenther continuing says:

The supplementary articles to the commercial treaty between Germany and Switzerland fix the tariff rates on goods imported by the one from the other party. The basis of the treaty is the most-favored-nation clause in regard to importation, exportation, and transportation in transit. In addition, commercial travelers of the one country when selling by sample in the other are free from fees or charges for license or selling upon exhibiting a card from their home authorities stating that the firm represented by the traveler pays a business tax at home. The traveling representatives from the other State may, as a general rule, only sell goods by sample, but wherever the native travelers (excepting peddlers) are allowed to carry goods with them for immediate delivery the same privilege is accorded to the commercial representatives of the other contracting party.

The railroads and canals in many of the countries of continental Europe are owned and operated by the government—Belgium, Germany, Switzerland, Italy, etc. In some of the countries the government owns and operates a number of the principal lines of railroad, but in all the government exercises supervision or control. In my report of October 25, 1899, with reference to the "Stave trade," attention was called to the discrimination against American staves in favor of such articles of manufacture from Austria and Russia.

TECHNICAL SCHOOLS.

Consul Kehl, of Stettin, writes explaining new regulations that have been issued for the admission of students to technical high schools in Prussia. The consul says:

The students will be divided into three classes—the "regular attending students," students for lectures only, and lecture visitors. As regular students, without any exception, such young men will be accepted who have acquired the knowledge necessary for being admitted into any university, said knowledge to have been acquired at a German "gymnasium," a German "ober-realschule" (a high school in which sciences as well as art and languages are taught), a Bavarian "industrial school," or the Saxonian Polytechnical Academy of Chemnitz.

As to foreigners, the ministry of ecclesiastical affairs and public education is to decide whether their scholastic erudition is sufficient to admit them.

German subjects, other than Prussian, will be admitted under the same conditions as Prussian subjects.

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As students admitted to hear the lectures only (i. e., without privilege of being graduated by the board of examiners), young men will be admitted, not possessed of the education necessary for being admitted into a German university, but having acquired the schooling necessary for performing only one year's military service. The admission of such students is put into the hands of the rector of the technical high school.

As lecture visitors such persons may be admitted to the lectures or demonstrations who are not eligible to either of the two classes just mentioned. The admission of lecture visitors will be granted by the rector, with the consent of the proper professor. There is particularly one new restriction in these regulations, viz, that all encouragements for foreigners are dropped. Setting aside the lecture visitors, only such foreigners will be admitted who are capable of complying with the German educational requirements or who are in possession of an equivalent foreign certificate of learning.

EMIGRATION STATISTICS.

Consul Harris, of Mannheim, furnishes the following details of emigration from Germany:

Statistics have recently been published showing approximately the emigration from Germany during the year 1904. From these figures it would appear that the number of emigrants from the Empire to transoceanic points during the year was 27,984. Of these, 22,018 sailed from the ports of Bremen, Hamburg, and Stettin. Of those emigrating, 26,085 went to the United States. Due, in part, doubtless to the fairly satisfactory industrial conditions in Germany for the past decade, there has been a marked falling off of emigration from the German States as compared with former years. Thus, in the ten years from 1885 to 1894, the number of emigrants varied from 120,089, the highest number in one year, to 40,964, the lowest, while during the decade ending with 1904 the largest number in any one year was 37,488 (1895), and the smallest number was 22,073 (1901). The emigration for the year 1904 is about the average of the decade. Those emigrating in 1904 are reported to have come from the several States and provinces as follows:

Alsace-Lorraine	580
Baden	818
Hesse	326
Oldenburg	412
Mecklenburg	259
Wurttemberg	1,273
Saxony	1,425
Bavaria	2,949
Prussia	16,402

So far as can be observed in southwest Germany, this emigration results from what may be regarded ordinary and normal causes, there being no apparent effort on the part of transportation companies and others to stimulate emigration. Doubtless the chief influence is that of Germans in the United States who in some cases encourage their friends and relatives to emigrate. The emigration to France along the present French border among families of French descent in the

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better circles is referred to as showing a tendency to decrease, but to still retain considerable importance.

Just what part of these emigrants return to Germany to live it would be difficult to ascertain. That a considerable number of them do so, there can be no doubt. In this consular district still survive more than fifty United States pensioners, in most cases soldiers or their widows who have returned to Germany to remain. The number of comparatively young persons who have come back on one ground or another and taken up their abode here is considerable, there being perhaps scarcely a village in this district where there is not one or more of these cases and frequently those of naturalized American citizens. The care of aged parents, marriages entered into here, or the consideration of health, are most frequently assigned as causes for this class of persons resettling here.

IMPORTS AND EXPORTS.

According to statistics transmitted by Consul-General Guenther, of Frankfort, the tonnage imports and exports of Germany for the first seven months of 1905, as compared with the first seven months of 1904 and 1903, were as follows: Imports, 29,920,488 tons, against 26,641,581 and 26,084,230 tons in 1904 and 1903; exports, 22,085,086 tons in 1905, against 21,680,898 and 21,525,581 tons in 1904 and 1903, respectively.

The classes of products which show increases and decreases in 1905, as compared with 1904, were as follows:

Articles.	Increase.		Decrease.	
	Imports.	Exports.	Imports.	Exports.
	Tons.	*Tons.*	*Tons.*	*Tons.*
Asphaltum, pitch, and resin	.....	15,369	17,697	.....
Cereals and other agricultural products	479,319	.....	.....	95,698
Clay goods	.....	.....	.....	29,586
Coal	2,016,572	.....	.....	277,075
Cotton and cotton goods	3,700	.....	3,700	.....
Drugs and colors	.....	72,523	.....	.....
Earths, ores, etc	60,224	529,635	.....	.....
Flax, etc	.....	.....	3,343	5,894
Groceries, spices, etc	70,347	.....	.....	29,241
Hides and skins	.....	.....	3,096	.....
Iron and iron wares	.....	122,769	35,398	.....
Machinery, etc	.....	13,519	.....	.....
Oils and fats	112,559	.....	.....	8,410
Stone and manufactures of	154,823	83,858	.....	.....
Wood and manufactures of	141,998	.....	.....	17,220
Waste	189,600	12,288	.....	.....

GERMANS IN FOREIGN COUNTRIES.

The German Government has made an inquiry to ascertain the number of people of German birth who are living in foreign countries. The figures, based on the German census of 1900 and on the latest census of each of the other principal countries, supplemented in some cases by special investigation, have recently been published. Consul W. F. Wright, of Munich, has made a table from these figures which is interesting. It appears that 3,029,514 persons of German birth live in countries other than Germany; that 450,392 not of German birth have acquired German citizenship, and 700,710 living in foreign coun-

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tries are reported as having retained German citizenship. The following table shows where persons of German birth are living:

United States	2,669,164	Belgium	53,408
Switzerland	168,238	Denmark	35,061
Russia	151,102	Netherlands	31,654
Austria	106,364	Canada	27,302
France	90,746	Argentina	17,143
Great Britain	53,402	Luxemburg	14,637
Australia	42,671	Italy	10,745

Compared with earlier statistics the number of Germans in almost all European countries has increased, while the numbers in the United States, England, Canada, Chile, and Argentina have decreased.

On December 1, 1900, there were 823,597 foreign-born persons in Germany, of whom 778,737 were of acknowledged foreign nationality. Following are the principal figures:

Austria	371,005	Switzerland	55,494
Netherlands	88,085	Russia	49,967
Italy	69,738	United States	24,842

THE SUGAR BEET CROP.

Vice-Consul Burrell, of Magdeburg, writes that experts who have recently inspected the sugar-beet-producing districts of Germany state that the prospects for the sugar yield are excellent. On account of this year's high sugar price considerable more land has been planted in sugar beets. Nevertheless, complaints are heard from all sides that the proportion of sugar in the beet is from 2 to 3 per cent less than in former years. It is possible, however, that this reduction may disappear if the present dry weather with cool nights continues, so that, according to the opinion held here, Germany may count on a large yield of sugar.

Much less land has been devoted to the cultivation of beet seed than was the case last year, but the opinion seems to be general that an average harvest is to be expected. Some regions have suffered excessively from the severe weather this summer, and the extraordinarily fierce storms have destroyed in some places two-thirds of the plants. The development of the seed is good, and promises a high quality if it should not be injured by long-continuing rain. The harvest of 1904 was small, on account of the great drought. This, together with the increase in the cultivation of the sugar beet this year, has practically cleared the entire stock, so that sugar-beet seed will be in demand this year, and it is asserted that the amount which will be produced will be entirely sold out. It is, indeed, doubtful if there will be enough to meet the demand.

THE HOP CROP.

Consul Bardel, of Bamberg, reports that estimates of the German hop crop appear to be very favorable. An increase will probably be reported from every district. The quality of the hops in Bavaria is said to be very good, and it is hoped that fair weather will prevail while the fruit is being gathered, so that its present superior color

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can be retained. The estimates, stated in American hundredweights, are:

	1905.	1904.
Bavaria	309,000	254,000
Wurttemberg	83,000	77,000
Baden	44,000	38,000
Alsace	121,000	94,000
Posen, Altmark, and Western Prussia	44,000	22,000
Total for Germany	601,000	485,000

From all other hop-growing countries in Europe, such as Bohemia, Great Britain, Belgium, France, and Russia, the estimates on the volume of the expected crop vary so much that it would seem safe not to quote figures yet, but there is no doubt at all that all countries raising hops this year will be able to report an increase over 1904. Consequently, it is also quite safe to predict that prices for this year's hops will range lower than those of last year.

INTERNATIONAL RIGHT OF AUTHORS.

Consul-General Guenther reports that the association of German publishers of newspapers has received the following reply from Prince Buelow, chancellor of the German Empire, to the statement of their wishes and propositions with reference to the question of author's rights, dated July 18, at Norderney:

"The question of international protection of newspaper news, raised in the petition of the 22d ultimo, has already been duly considered at the Paris conference of authors in 1896. In view of the great importance of this question, also from the standpoint of public interest, I must acknowledge the wish of the association, that the subject should again be looked into, as justified. The conference which will shortly take place for this purpose will give an opportunity to enable German interests to take a stand with reference to the prospective revision of the authors' agreement of Berne. I shall cause that this conference, which eventually will take place, participated in by experts from the circles of authors and publishers, will also extend to the protection of newspaper news, and that the respective propositions and statements will be considered."

AMERICAN SECURITIES.

Consul-General Guenther reports a strong tendency in Germany toward American securities. He writes:

The great development of the United States causes lively speculation in the securities of that country throughout Germany. Though there are but few American shares dealt in on the German stock exchanges, owing to the injudicious German bourse laws, a large amount of German capital is invested in this class of securities. The purchasing orders are executed in London and New York. To-day the shares of United States railroad and industrial companies are as important to

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the Germans as were gold shares a few years ago, when they led in the money markets. At present the German investor or speculator looks with greater avidity for the cable reports of the New York stock market than he does for the quotations of the securities listed on the German exchanges. We do not like to think of this as another "American danger," still these conditions denote the progressing dependence of Europe's economic life upon transoceanic conditions.

TELEGRAM SIGNATURES REQUIRED.

Consul-General Guenther further reports that according to the 3d paragraph of the rules and regulations of the German telegraph service, the sender of a telegram is bound to establish his identity, if demanded by the telegraph station official. This rule, while it enables the telegraph official to frustrate apparently fraudulent telegrams, is, however, not sufficient to furnish protection against fraud, which is not infrequently practiced through counterfeit telegrams. With reference to important telegrams it is therefore advisable to have the signature acknowledged by the proper authority under the official seal, and to have the acknowledgment telegraphed with the message. The telegraph office is required to ascertain the genuineness of the acknowledgment; if doubt arises the telegraphic transmission of the acknowledgment is to be refused. The telegraph officials are not authorized to acknowledge signatures themselves.

EXPOSITION AT ANTWERP.

Although it is more than likely that attention has been called to the International Exposition of Housekeeping Articles, which is to be opened in Antwerp in April, 1906, it will not hurt, writes Consul-General Guenther, of Frankfort, to have the attention of our exporters and manufacturers drawn thereto again. The exposition will embrace fifteen divisions, among which will be articles of food, clothing, household and kitchen fittings, implements, etc., appurtenances to dwellings (furniture, drapery, wall paper, bathing and heating arrangements).

As American houses contain numerous useful equipments, never seen on this side of the water, our manufacturers will find this Antwerp exposition an excellent opportunity for introducing them to all Europe through the merchants and tourists who will visit this great commercial center during the exposition.

GELATIN IN AUSTRIA.

Consul-General Rublee, of Vienna, reports that the manufacture of gelatin is on a small scale in Austria, the total product during a year being valued at about $600,000. Sheet gelatin and gelatin for food purposes are manufactured, of which the latter is exported to some extent to the United States. About 3,300 tons of food gelatin are produced annually. The manufacture of sheet gelatin has suffered considerably from the insufficiency and the high price of the raw material in recent years. The export in this article is inconsiderable.

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HELIGOLAND.

THE ISLAND DISAPPEARING.

Recent news from Heligoland, according to the London Standard, speaks of further encroachments by the sea on Heligoland in the North Sea. Since the island was ceded to Germany, in 1890, in exchange for Zanzibar, it has lost a considerable area, not alone through the collapse of the sandy cliffs which surround its shores, but also through a definite sinking on its south side. Engineers have been at work since the cession in a continuous endeavor to safeguard the island from demolition, and considerable work has been performed in filling crevices in the rocks, while breakwaters have been built to break the force of the sea. It has been found, however, that the very sea floor on which these are constructed is without stability, and it is believed that the work can only serve to delay the encroachment of the sea on the friable cliffs. It has now a circumference of a little less than 3 miles, as against 3¾ in 1890. The island has little importance and is known chiefly as a watering place. Its population numbers about 2,000, and the natives of Heligoland are creditably known among the North Sea and Baltic pilots.

THE BRITISH CONSUL at Prague reports that at a meeting of cotton weavers held July 10 in Vienna it was resolved, in consequence of the high price of cotton, to reduce the output by one-sixth. This will probably be effected by stopping work for one day each week. As there are in Austria 110,000 mechanical looms, and each loom on an average produces 160 meters per week, the total in this period is 17,600,000 meters, which when reduced by one-sixth would give a weekly reduction of 2,930,000 meters.

CONSUL BARDEL, of Bamberg, Germany, reports that toward the end of the year 1907 the port of Hamburg will have the biggest dry dock in the world. It is to have a lifting power of 35,500 tons; the largest dock, at present, lifts 17,500 tons. The largest ships of the mercantile marine can be docked in it. In building this dock care is taken that, if necessary, it can be transported to the lower Elbe, near Brunshausen, which, in the event of war, would be important.

ALL THE large works engaged in electrical industries in Germany have announced to their customers that, owing to increased wages and cost of raw materials, a general advance of 10 per cent has been made in their products, including motors, machines, apparatus, fittings, etc.

THE BERLIN TIMES contains notices inviting tenders for 6,400 tons of rails and connecting pieces for use in constructing a railway station in Copenhagen. Interested parties might write to the United States consul at Copenhagen for facts, terms, etc.

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FRANCE.

INDIFFERENCE OF MANUFACTURERS.

AMERICANS MUST BE AS WILLING TO SELL AS TO FIND BUYERS.

Instructions were recently sent by the State Department to Consul Robert P. Skinner, of Marseille, France, at the request of a representative association of manufacturers for a report upon "Manufacturers' Indifference to Foreign Trade." A report has been made by the consul which deals with the question in terms that are quite pungent, and which contains advice based on his experience that will be valuable to all individual manufacturers who are striving to secure sales of their products in foreign countries. The following paragraphs are taken from Consul Skinner's report, the entire document having been sent to the party at whose instance it was prepared:

The Association sends to consuls and others classified lists of members, and urges foreign inquirers to enter into correspondence therewith, but if I supply twenty addresses in a given line to a foreign correspondent I am surprised if I hear that one-half have given themselves the trouble to reply at all, while the other half, with a few exceptions, lay down conditions utterly discouraging to the foreign inquirer. It is, of course, true that the number of American firms patiently working up their over-sea business is increasing very rapidly, but not so rapidly as to prevent me from saying that the difficulty with our foreign trade is quite as much to find American firms willing to sell as to find foreign firms willing to buy. Let me cite only the cotton-goods trade: Every list of American manufacturers in my possession contains a large number of cotton-goods producers. It is fairly to be presumed, in view of these advertisements, that they are seeking new business. I have sent these names to buyers of cotton fabrics in France, Morocco, Tripoli, Tunis, Abyssinia, and Persia, and I have yet to hear of one manufacturer who has been willing to engage in actual business relations. The firm of Mohamedally & Co., of Harrar, Ethiopia, has been at work for over eighteen months trying to buy cotton goods direct for cash in the United States, and has at last succeeded in making a start, and that start through a commission house in New York.

MANUFACTURERS MUST AROUSE THEMSELVES.

We want favorable treatment as regards tariffs. We want better banking and freight facilities; we want every advantage possessed by our competitors, but we can overcome every disadvantage and still fail to increase measurably our exports of manufactured goods if the manufacturers thereof can not be found willing to sell. The firms who are succeeding in the export business are principally those who sell almost from factory to consumer. They have their own agencies and their own methods, but the general attitude of American manufacturers and their army of general sales agents, agent brokers, foreign

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commission buyers, with their cash-over-the-counter and you-pay-the-freight terms, savors still very much of the circumlocution office, and how not to do it.

The radical defect in this, and in every other discussion of foreign trade, is its too general point of view. I am not much in favor of essays and speeches upon this topic, and am really optimistic as to our future. What is needed at this time is to arouse the interest of the individual manufacturer to the point of looking into the question for himself; and he can not do this better than by coming abroad personally, forgetting the presidency of his corporation, carefully avoiding Paris and the delightful watering places, and working as energetically as a commercial traveler on a commission basis to secure orders. A few months of such contact with foreign conditions will demonstrate at small expense, and more effectively than by reams of correspondence, his ability to satisfy foreign requirements, to meet competitive terms, and whether his particular factory will be best served by establishing a direct sales agency or by securing alliances with existing foreign firms.

AMERICAN SECURITIES.

MARKED TENDENCY IN EUROPE TOWARD THEIR PURCHASE.

Vice-Consul Piatti, of Nice, reports a European tendency in favor of American securities, but calls attention to the efforts of financial writers to stem the tide that seems to be setting in favor of American securities. The report follows:

Reference has been made in several annual reports to the extent to which the attention of French investors is being drawn to American securities for permanent investment. That the tendency on the part of the French public to look to the United States market is growing apace is indicated by the one-sided and often superficial arguments used by financial writers to stem the tide of this tendency. The principal argument used is that the shares of our railways are speculative in character and that they fluctuate too much. Regarding bonds, the principal and perhaps the only arguments are that many of them have many years to run and that their coupons are not payable in Europe.

Shares may be better investments for the trained financier than for the untrained investor, but the argument that bonds are mostly "long running" is to be ignored, leaving only the statement that coupons are not payable in Europe to be considered. It is a well-known principle in all financial markets that a long-running bond is always quoted at a higher price than short ones yielding the same interest. Examples of this are so numerous that they need not be quoted here. The non-payment of coupons in Europe may be an objection. The French investor is in the habit of presenting his coupons and receiving the amount thereof at once, and if it were known that the coupons of bonds were payable on presentation at a given bank or by bankers in Europe, then banks throughout the country would pay such on presentation, as is now done in the case of many other foreign securities.

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AMERICAN SECURITIES WANTED.

Some ten years ago a local concern sent its first order for an investment in American bonds, and has built up a regular American business. This is, perhaps, confined to its inner circle of clients for investments, but the business in that circle has grown apace, particularly in the past two or three years. A representative of this concern called the other day and showed me a list of values in which he had been dealing, and asked for an additional list considered to be among the leading ones on the New York market. In discussing the matter I was not a little surprised to find that he was not at all averse to looking into the matter of shares of "common" or "preferred" stock, provided they were considered "good." Regarding these, I ventured to tell him that the days of wide fluctuations in our markets as to standard values are nearly over, and that this tendency will diminish as foreign absorption increases. He readily assented, bearing in mind the fact that a few shares only of local values offered for sale on his own market sufficed to depress the market, while a "block" of such shares is practically unsalable.

WHAT INVESTIGATION REVEALS.

The result of any investigation will show that the ruling rate of interest of most values has become so low that investors are forced to look out of the country for investments; that the only real obstacle to the sale of American bonds is the fact that coupons are not known to be payable in Europe; that the matter of quotation of these values will take care of itself as the interest of investors in these values increases; that the rapidity of the increase of investments requires only the publicity of details and information touching values for its realization; that with the general public the nature of American investment values, past history, advantages and future prospects, are practically unknown; and finally, that banking institutions, and bankers themselves, once informed on such points, are far from being disinclined to encourage investments therein.

WINE TRUST.

COMBINE IN SIX DISTRICTS.

Consul Bardel, of Bamberg, Germany, reports that a wine trust of the wine growers of southern France is to be formed, to comprise the six important wine-growing districts of Hérault, Aude, Gard, Pyrénées-Orientales, Bouche-du-Rhône, and Var.

The growers participating in this trust are to sign a contract binding for fifty years. Each one has to state the extent of his vineyards, which is not to be increased without the consent of the trust. The members bind themselves to state the volume of their production and to give the exact figures of how many hectoliters were pressed in their establishments, as also how much alcohol their wine contained. Each grower obligates himself, under penalty, not to blend wines nor to sell grapes or cider. He will be allowed to set aside a certain amount for home use, but has to state the exact quantity set aside.

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The trust will buy up the whole harvest previous to August 15 each year. The price to be paid will be 1 franc (19.3 cents) for each degree of alcohol, to be paid for in quarterly rates due in December, February, April, and June. This price may be advanced by participation in the annual profits of the association, for every member is to get pro rata 45 per cent of the net profit, besides 10 per cent for division among his laborers. The net profit is to be fixed after a deduction of 5 per cent for interest on the capital invested, as also of the sums necessary for reserve and sinking fund. The spoiled wines and those not containing more than 8° of alcohol will be distilled by the company. The owners of such wines receive the sales price of the alcohol thus gained after deducting costs. If overproduction is proved, the company is to have the right to distill a part of the total output.

The capital for this trust is to be 300,000,000 francs ($57,900,000), provided the wine growers participating guarantee the production of 20,000,000 hectoliters (5,283,400 gallons) per annum. One half of this money is to be expended for building cellars capable of holding 7,925,100 gallons of wine. All wines are to be sold in sealed bottles. This plan has created much enthusiasm among the growers in all the districts. They are, however, somewhat afraid of the competition on the part of the growers outside of the six districts named. They intend, therefore, in the course of time, to induce these outsiders to join the trust.

CATALOGUES UTILIZED.

Vice-Consul Piatti, of Nice, France, has hit upon an excellent method of making catalogues serve a useful purpose. He says:

It may perhaps be of interest to our exporters to know of the system that we have inaugurated at this consulate with regard to catalogues of American goods. We have found that the calls at the consulate of intending importers were not as numerous as we might wish, nor as the apparent opportunities for business would warrant, hence, when we receive a catalogue and have carefully perused it, we forward it to what we have reason to suppose is the most suitable firm in the town or neighborhood with a letter stating that we are at their disposition for any further items or information referring thereto. As the reading matter is almost invariably in English, the parties addressed, if interested, apply to us for the translation of the various explanations and the transforming of weights, measures, and money to the foreign standard. By this means we are enabled to furnish them with a rough estimate of what an invoice of goods would cost, laid down c. i. f. at the harbor, and we are at the same time often enabled to ascertain details touching the cost, nature, and discounts of the merchandise they deal in which we might not otherwise obtain, and which further enables us to discuss the "pros" and "cons" touching the matter. Nor is any consular dignity lost in doing this.

PREVENTION OF FRAUD.

Consul-General Skinner writes about French legislative efforts to suppress fraud and to prevent unfair competition in France. He says that deceit in regard to merchandise sold is to be punished by fines ranging from $19 to $965, and terms in prison that range from three

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months to a year. In case the deceit is carried out by means of false weights and measures the term of imprisonment may be extended to two years. The details of six of the more important articles of the act were translated by Mr. Skinner and transmitted to the Bureau of Manufactures, where they are now on file and may be seen by interested parties.

ITALY.

THE SILK SEASON.

ESTIMATED SHORTAGE IN THE CROP.

Consul Dunning writes as follows from Milan, Italy, in regard to Italy's production of silk:

The statistics of the Italian silk season of 1904–5 show that excessive rains, in the month of May and the unusual humidity of the atmosphere during the feeding season of the silkworms, had a retarding effect on the results for the year. Though the figures show a steady rise over those of a year ago, the industry has not yet regained its normal status, before the severe losses of the silk season—1903–4—which resulted in financial loss to the spinners.

The season of 1904–5 was looked to to make up the loss. It has not done so. In June, 1904, raw silk of 10–12 (ten-twelfths) standard, the prevailing quality for comparisons, was valued at $7.28 per 2.2 pounds, and prices of cocoons were relatively low. Here are the prices for each month of the season of 1904–5:

1904.		1905.	
June	$7.28	January	$8.40
July	7.47	February	8.25
August	7.47	March	8.00
September	7.57	April	8.10
October	7.80	May	8.15
November	8.00	June	8.54
December	8.25		

The price of yellow cocoons is 64 cents per 2.2 pounds, against 48 cents last year. It is thought that the crop is about 20 per cent below the average in amount, and the shortage is accounted for by the bad weather. Mulberry trees to produce rich and abundant leaves for silkworm food must have dry, fair weather in an unlimited amount. Toward the end of last April, at the time when the eggs were hatching, the leaves were very promising, but the excessive and extraordinary rains in May did tremendous damage. The fall of rain during June averaged 13.35 inches. The usual spring rains in May are about 4 inches for the month.

On account of the continued and dangerous humidity in May the prices of mulberry leaves rose from about $3 to $5 per 220 pounds. The humidity also affected the young worms to a degree said to be without precedent in Italy. Only the arrival of a run of favorable weather late in June saved the situation.

It is not yet possible to give the number of cocoons gathered for the year just ended, but it is estimated that there will be a shortage of nearly 19,800,000 pounds compared with the totals for last year.

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Here is a table of the crop of cocoons for ten years, taken from a semiofficial source. The tons are of 2,240 pounds:

	Tons.		Tons.
1895	42,074	1901	40,330
1896	41,182	1902	41,935
1897	36,726	1903	31,162
1898	39,612	1904	42,743
1899	41,587	1905	33,000
1900	42,716		

The average during the above period is about 40,300 tons, so that the present season, if the estimates mentioned above are correct, will be about 20 per cent below the normal. Higher prices of cocoons may partly remedy the deficiency in the market.

COLONIZATION IN SOUTH AMERICA.

FAVORABLE REPORT FROM A GOVERNMENT COMMISSIONER.

In view of the efforts to secure Italian emigrants for labor colonies in southern Atlantic States of South America, the report of Signor Salemi-Pace, chairman of the Italian commission of enquiry, as to the advisability of that Government establishing emigrant colonies in Brazil, becomes of special interest. Italy is just now seeking foreign commercial connections, particularly in South America, so that both as to the future of export trade and of the volume of westbound emigration, the case appeals to merchants and others of the United States. Signor Salemi-Pace's commission was appointed to look into the advisability of using large amounts of Italian capital in colonization undertakings in southern Brazil. He finds that no such undertaking in the past has shown encouraging results. A German colonial society, founded at Hamburg in 1887, and which to-day owns about 1,625,000 acres of land in Brazil, has not proved a success, and affords a useful illustration of the difficulties attending such work.

SUCCESSFUL COLONIZATION.

The Italian commission submits the opinion that colonization in South America could be undertaken with success only under the following conditions:

1. By a careful study of the wants of the Brazilian markets and the exact relation of the proposed colonies to them, having regard all the time to outside competition.

2. Careful choice of locations and study of the means and cost of transportation to and from Italy.

3. The creation of a special bureau of agricultural and commercial management to market the products of the colonies at the opportune seasons and under proper auspices.

Signore Salemi-Pace considers the question of transportation between South America and Italy of supreme importance and advises the construction of local railways and canals for the benefit of the colonists. In a general way his recommendations as to Brazil coincide with those recently made in the Milan chamber of commerce as to Mexico, reported on by me a few weeks ago. Italian emigration in general is the subject of a report just sent out from Rome and includ-

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ing figures for the three years 1902, 1903, and 1904. The report shows that in 1904 223,102 emigrants left Italy, 29,000 more than in 1902 and 52,000 more than in 1903. The heaviest month of the year for emigrations was March, with 41,000, and July was the lightest, with 6,800.

In the year 1904 the number of Italians going to the United States was 70,000 less than in 1903. During the year 26 per cent of the total arrived at the ports of emigration in Italy with prepaid tickets. In 1904 the percentage of emigrant children under 10 years of age was 11.19, while in 1903 it was 9.76. During 1904 Naples led the list in the number of emigrants, with 54.07 per cent, or 121,962; Genoa was second, with 78,000, or 35.03 per cent.

TRADE WITH MEXICO.

PLAN OF COMMERCIAL CAMPAIGN.

Consul Dunning further reports that Italy is bending every effort to establish better trade relations with Mexico than have hitherto obtained. He says:

Every American business house having connections in Mexico will be interested in the beginning of a systematic effort on the part of Italian manufacturers and shippers to get a solid foothold in that country. The effort is in the hands of some of Italy's most active merchants and manufacturers—men who mean business. In the Milan Chamber of Commerce a few days ago one of the principal financiers of Italy read a paper in which he described conditions in Mexico and outlined a plan of campaign by which Italy could develop and secure a share of the trade now controlled by other nations. He advised keen competition and the establishment of a direct freight line between Mexican and Italian ports.

Mexico, the author of the paper declared, offered a good opportunity for the investment of Italian capital, based on its mineral wealth, its climate, the varied character of its vegetation, the unusual opportunities for the application of hydraulic and electrical machinery, the deposits of coal and petroleum, and the increase in railways and internal improvements under President Diaz. The chamber was urged to consider Mexico as a good field for the numerous Italian makers of heavy machinery for water, steam, and electrical plants. "It should be regarded as a field for our best industries," said the speaker, emphatically.

The definite character of the campaign is indicated by the fact that at the meeting of the Milan chamber, skins, woods, feathers, tints, and various fibers which could be imported direct from Mexico to Italy to supply sundry local trades were exhibited. The author of the paper urged upon the chamber measures to bring about a better commercial relationship between the two countries. Marine freights, he said, are now prohibitive. To circumvent that difficulty he proposed the organization of an Italian company with a capital of 150,000 lire (about $30,000) to send goods out in sailing ships and to bring back Mexican products, particularly woods and skins. Starting on this modest scale, he believed a large and valuable trade could be established, with

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direct freight lines backed by Italian capital. He felt that a test along such lines as he proposed would convince Italian commercial influences of the value of the field.

An important part of the paper was devoted to an argument in favor of an Italian bank, to be established in some principal Mexican seaport, for handling bills, remittances, credits, etc., and assisting Italian manufacturers to arrange a system of long credit, such as is required in a country like Mexico. Such a bank, with Italian branch stores set up by the best home manufacturers, and aided by a direct Italian freight line, would, in the opinion of the speaker, open up a new field in which practically every Italian product could be sold, and in which Italian manufacturers could supply themselves at a most advantageous price with a large amount of raw material now bought in other countries under considerably more restricted and costly conditions.

NATIONAL PROGRESS.

MATERIAL AND MORAL ADVANCEMENT.

Consul-General Guenther, of Frankfort, Germany, makes an interesting report on the progress being made in Italy in every field of business activity. He writes:

Of European countries Italy has, comparatively, made the greatest progress in the last decade. Ten years ago Italian securities were considered poor second class; they were mostly in the hands of foreign capitalists. This condition has been reversed. Italian finances are now in a healthy state and most of the bonds of the Government, of the railroads, and the municipalities, etc., held abroad have been bought back or redeemed. The bulk of these securities is now held by home capitalists and the interest payments to foreign creditors are now comparatively small. Formerly the paper currency of Italy was at a large discount, but her sound budget and the improvement in her foreign trade have wiped out the discount.

The savings of the Italian people show large gains; manufacturing industries have increased amazingly, although the country does not possess iron or coal. The abundant water power is beginning to be used for industrial purposes, largely for the creation of electric energy. Within the last decade the exportation of manufactured goods has advanced from $31,400,000 to $80,400,000. In former times Italy imported nearly all cotton goods; now her cotton factories not only supply the home demand but export heavily to the Levantine countries and to South America. By putting a heavy duty on imported sugar, sugar-beet cultivation has become an important domestic branch of agriculture, and home production now supplies the home demand. Machine and ship building and the manufacture of cars and of automobiles have made great progress.

FRUGALITY OF EMIGRANTS.

Another cause of the betterment of the finances and the economics of Italy is to be found in the accumulation of money and property by the Italian emigrants in the United States, Brazil, Argentina, and

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other countries. These emigrants are very frugal and industrious, almost as much so as the Chinese coolies. Every year a large part of their earnings is sent home to relatives and for investment in home securities. One-half of the Italian emigrants return to their native country after they have saved a small competency abroad. The export trade of Italy is constantly increasing, especially to eastern countries, where it is making inroads on the long-established trade of older manufacturing countries. Some economists see in the Italians the Japanese of Europe. They are constantly gaining in the trade with Turkey and other countries of the Levant, and they have strong aspirations for getting colonies in Asia Minor and Africa, which are to supply them with raw materials and will become large and profitable markets for Italian manufacturers. In aid of this aim the Italian legislature has recently voted $30,000,000 for the increase of the navy, which by 1909 will have in service 15 modern built line of battle ships, 13 ironclads of older style, 14 protected cruisers, 8 smaller old-type cruisers, 28 torpedo destroyers, 42 seagoing torpedo boats, 47 torpedo boats of the first and second class, and 13 submarine boats.

LARGER ECONOMIC FIELD NEEDED.

In connection with this, the remarks of a writer on political economy in Germany are of interest. He says:

"In future wars between civilized nations will be of rare occurrence. They will have their cause principally in the effort to maintain the political status quo by means of increasing the economic power. Thus some of the populous European countries must, of necessity, secure additional territory, i. e., colonies—a larger economical field—in order to keep and support their increasing population and to employ their industrial classes, which now form the largest part of it. The necessary struggle for obtaining markets and colonial supply fields will lead to armed contests, which now cast their shadows before in the competition for sea power, and the preparations now making to obtain such by increasing the navies and obtaining naval stations in different parts of the globe."

SIGNOR FREDERICK FOSSI writes from Milan, Italy, that he is prepared to act as agent for parties in the United States who intend or are desirous of exhibiting at the exposition to be held in Milan, Italy, in 1906, to celebrate the opening of the Simplon tunnel. Mr. Fossi would like to hear from parties producing and desirous of exhibiting their wares.

THE CHAMBER of commerce in Genoa has decided to have another railroad line built from that city to Milan, and will grant a subvention of $200,000 for that purpose.

A PROJECT for utilizing the Liro-Scalcoggia and Drago waterfalls for the production of electric energy has been presented to the prefect of the province of Sondrio, Italy.

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NETHERLANDS.

THE HAGUE ARBITRATION PALACE.

PLANS FOR CONSTRUCTING THE PERMANENT COURT.

Mr. David J. Hill, minister to the Netherlands, has forwarded to the Department of State copies of the programme for competition for architectural plans of the Peace Palace for use of the Permanent Court of Arbitration. The competition is open to architects of every country. Plans must be submitted within seven months from August 15, and all explanations must be given in French. The jury that will pass upon proposals is international, and full information regarding the plans may be obtained from Mr. D. Knuttel, architect, at The Hague. Prizes will be awarded, and the plans for which awards are made will become the property of the board of directors of the Carnegie Foundation at The Hague. With the plans must be submitted a short explanatory notice, legibly written in the French language, and, in order to render possible correspondence with the author of the plans, a closed and sealed letter, mentioning his name, and bearing on the outside an address and an epigraph, which epigraph shall also figure on the drawings, on the explanatory notice and the package.

The jury of award is composed of the chairman of the board of directors of the Carnegie Foundation; Mr. Th. E. Collcutt, London; Dr. P. I. H. Cuypers, Roermond; Geh. Ober-Hof-Baurat Ihne, Berlin; Prof. K. König, Vienna; Mr. Nénot, member of the Institut de France, Paris; and Prof. W. R. Ware, Milton, Mass. The prizes will be 12,000, 9,000, 7,000, 5,000, and 3,000 guilders, respectively. After the decision of the jury all plans sent in will be publicly exhibited at The Hague for a month, and the official report of the jury will be published and deposited for exhibition. The Peace Palace will include a court-house and a library, each of which buildings will consist of a basement and two upper stories. The details of the plans, together with illustrations of sites, are on file in the Bureau of Manufactures.

THE NEW harbor works at Antwerp, Belgium, are estimated to cost $36,600,000. The State will bear $20,200,000 of the expense. For the various machines and equipment required in this great undertaking American contractors should be able to compete successfully.

ONE HUNDRED and thirty thousand dollars will be expended by the ministry of public works for harbor improvements in Blankenberghe, Belgium.

THE CITY of Essen, Germany, projects building a new hospital to contain 619 beds and to cost $976,000.

THE CITY of Bonn, Germany, has issued $1,048,000 bonds for electric tramways to be built.

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NORWAY.

SCHOOL FOR DAIRYMAIDS.

PRACTICAL INSTRUCTION IN FIELD AND BARN.

Consul Rasmusen, of Stavanger, reports that a movement has been started to promote the dairy interests of that country by means of trained dairymaids, who are to be instructed under competent teachers in the care of the cow and other domestic animals. The consul says:

There has been considerable improvement along agricultural lines in this consular district lately, and dairying in particular has received much attention. The society for the promotion of "Norge's vel" (Norway's weal) has during the year established schools, whose aim will be to "train young girls from the rural districts in the care of the cow and other domestic animals." The length of each course is six months, commencing October 14 each year. The instruction will be mainly practical, and taught in such a manner that pupils, under the guidance and supervision of the instructor or instructress, each by turn will feed and tend the entire stock of cattle, sheep, swine, and poultry. In addition to feeding, tending, and other work pertaining to cleanliness of the animals in their respective quarters, the pupils are required to perform the dairying, scrubbing, and cleaning of milk vessels, and once a week weigh the feed and milk and keep a record thereof. The course also includes reading and writing, together with instruction from modern text-books concerning the care of live stock, including feeding and dairying. In order to be eligible to enter these schools pupils must have attained the age of 17 years, have had some previous experience in dairying, be of good health, and possess good moral character, for all of which a certificate must accompany applications for admission. Board and tuition are free.

The foregoing report of Consul Rasmusen bears strong evidence that the practical—almost scientific—development of the Danish dairy industry, and the very large amount of money received annually by Denmark, from its sales of butter to England mainly, are having their effect on the neighboring Scandinavian countries, where the dairy conditions are about the same as in Denmark.

Although the conditions, as applied to girls and women, revealed in Consul Rasmusen's report are inapplicable, in a large measure, to the United States, it is well that our farmers should know the extreme efforts put forth in European countries for the exploitation of their dairy industries, for their products will compete with our products in foreign markets, and we can only hope to win our share of those markets, in the face of such acute competition, by overcoming their extreme labor applications, to the production of butter, in the main, by superior intelligence and more effective appliances.

The principal efforts of the Scandinavian dairy interests are chiefly toward the output of butter for the British market, and the results fully justify their efforts.

IMPORT OF BUTTER INTO ENGLAND.

In this connection the following statement from British official returns, showing the imports of butter into the United Kingdom from

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Denmark, Norway, Sweden, and the United States in 1904, should be an incentive to our dairymen to put forth their best efforts to win and hold their share of the foreign butter trade of England, for at present their showing therein is anything but commendable.

Imported from—	Quantities.	Value.
	Pounds.	
Denmark	191,660,112	$43,851,300
Norway	3,195,584	686,675
Sweden	23,160,592	5,170,490
Total Scandinavia	218,016,288	49,708,465
United States	7,700,484	1,432,676
All other countries	249,275,788	50,135,544
Total imports	474,992,560	101,276,685

FRUGALITY OF IMMIGRANTS.

LARGE SUMS OF MONEY SENT FROM AMERICA.

Consul-General Bordewich, of Christiania, says Norwegian immigrants send back large sums of money to their relatives in the home land. He calls attention to losses caused by carelessness in sending. He says the only safe way to send is by registered letter, bank check, or postal order. He writes:

Money is evidently sent in ever-increasing amounts from America to Norway. While a small portion of it may be in the nature of business transactions, the larger portion is undoubtedly gifts or donations from naturalized American citizens to their less fortunately situated relatives and friends in the old country. The mails are most commonly employed for the transmission of money for such purpose. The amounts sent by postal money orders in the years 1899–1903 were as follows:

1899	$579,000
1900	674,000
1901	755,000
1902	995,000
1903	975,000

Figures for 1904 are not at hand, but they will show about the same as for 1902. Some money is of course sent in the same way from Norway to America, but the aggregate is much smaller than what is sent the other way. The balance in favor of Norway is calculated to be no less than $4,250,000 for the period 1899–1904.

Of the money sent through bank checks there is no record; it would seem probable, however, that the amounts so sent would not go much below the amounts sent by postal orders.

MONEY OFTEN STOLEN.

Large amounts of money are unfortunately sent from America in common letters, and this money is very often lost. It appears that the temptation offered in this way is too great for some of the postal clerks and messengers. They know that a large portion of the letters from America contain currency, and the letters disappear. I believe this happens much oftener after the letters have left America than before. Only two years ago a Norwegian postal clerk was convicted

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of having been long and systematically pilfering from the mails; he had done away with some 1,500 American letters. A few days ago another was convicted of the same offense; he had appropriated at least 1,600 American letters in two years. Their sentences would appear rather light in proportion to the nature of the crime and its many possible consequences and disappointments—one was given two and the other three years' imprisonment.

Norwegian postal regulations impose a fine for sending larger amounts than 2 kroner in a common letter, except postage stamps, which may be sent to the amount of 5 kroner.

The American donors ought to be made aware of the risk they run in inclosing currency in common letters. The only safe way is to send it by postal money order, in registered mail, or by bank check.

UTILIZING SCANDINAVIAN RIVERS.

According to Export, the organ of the Central Union for Commercial Geography of Germany, Sweden is planning to use every ounce of water now going to waste over her falls and in her rivers for electricity. Engineers are in the hills making surveys, and capital is getting ready for the call that is sure to come just as soon as the surveys are completed. The same may be said of Norway, where the waters have shorter distances to run, but often of tremendous volume. In Sweden the power will be put to work in all manner of mills; in Norway in the mines—iron and copper. The movement in Norway is being backed by foreign capitalists, particularly Americans.

UNITED KINGDOM-NETHERLANDS CABLE AGREEMENT.

The Department of State has received a copy of an agreement between the United Kingdom and the Netherlands, modifying the agreement signed at London February 13, 1899, and at The Hague on March 13, 1899, concerning telegraphic correspondence between the two countries over the direct submarine cables.

Article IV of the above-mentioned agreement of February 13–March 13, 1899, shall be modified as follows:

The United Kingdom charges itself at the joint expense of the two countries with the care of the proper maintenance of the cables, and shall for this purpose keep at its disposal a suitable cable ship and the necessary cable.

The Netherlands agrees to pay to the United Kingdom during the time that the cable ship is in commission for the repair of the submarine cables such sums for hire of the cable ship as shall from time to time be mutually agreed upon.

Moreover, the two countries shall pay in equal shares the further cost of cable, cable stores, coals, mooring, unmooring, pilotage, and dues, etc.

If at any time it should be necessary to hire a cable ship in consequence of the cable ships belonging to the British State telegraph administration not being available, the cost of hiring shall be borne equally by the two countries.

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RUSSIA.

MARKET FOR MACHINERY.

OPPORTUNITIES TO SELL AMERICAN AGRICULTURAL MACHINES.

According to the British Board of Trade Journal, Russia offers an excellent field for many kinds of machines. The field is one that will or ought to repay every effort made by Americans to sell therein. The present time is one of great promise. The Journal says:

His Majesty's Consul-General at Odessa (Mr. C. S. Smith) in his report to the Foreign Office, states that the demand for agricultural machinery seems to be but little affected by the war.

The consul-general writes: "If a good harvest comes, preparation must be made to save it, and all the more so considering that so many hands have been sent away to fight. Also the present condition of agrarian unrest is a reason for being provided with machinery; it is well to be as far as possible prepared lest the peasants should suddenly make exorbitant and impossible demands at harvest time. * * *

"Harvesters include reapers and binders. * * * Lightness and cheapness are the principal qualities needed. * * * Supplies are believed to be insufficient for the demand, partly because of the expected good harvest and partly because of the doubts as to the numbers of the available hands for harvest and their willingness to work. There is no duty on harvesters, and I may mention that a 6-foot binder sells for 270 rubles (about £28), and a 5-foot self-rake reaper for 153 rubles about (£16 4s.).

"Thrashing machines and engines are made and imported by British firms, though there is a strong German competition, principally on account of the long terms of payment given by German sellers extending over three, four, and even five harvests.

KIND OF PLOWS REQUIRED.

"Twenty years ago plows used to be imported almost entirely from the United Kingdom; but with the development of the manufacturing capabilities of Russia, the high price of the British made plow and the imposition of a duty, the import ceased. The Russian demand (with the exception of from 3,000 to 5,000 cheap plows imported annually from Germany) is now supplied by two Russian firms in Odessa. Between them they are said to sell about 90,000 plows a year. These plows are made after the patterns formerly sold by British and German importers, but in quality and durability they are far inferior to the British made article. The local requirement is a cheap plow suitable for small horses. On account of bad roads and difficulties as to water and fuel plowing with a traction engine is the exception in this country. I am told, however, that there are signs of a desire on the part of some large landed proprietors to see further trials of mechanical power for plowing.

THRASHING AND BRUISING.

"The virgin steppe land is fast being brought under grain cultivation, so that the available supply of the nutritive though coarse steppe

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hay is becoming insufficient in quantity and too high in price for the profitable feeding of working oxen. There would seem, therefore, to be a good opening for a machine which should take the straw as it comes from the thrasher, reduce it to short pieces, and bruise it thoroughly, so that when mixed with a small proportion of barley, or other grain, it may form a suitable fodder for sheep, working oxen, etc. The bruiser ought to be designed for attachment to the thrasher, so that the whole process of thrashing and bruising may be effected at once. A German bruiser has already been put upon the market this season. It is said to be able to deal with the amount of straw delivered by a 4.6 drum thrasher, the thrasher and bruiser being driven together by an 8-horsepower engine.

"Vegetable and flower seeds are annually imported in considerable quantities. The insertion of short illustrated price lists, in Russian, in the principal papers read by landowners ought to be remunerative. The translation and distribution of such lists ought not to be either expensive or difficult if made through business houses of standing in Russia. A German farmer colonist, of whom there are many thousands in south Russia, are likely purchasers. In order to reach these it would be advisable to publish such lists in the Odessaer Zeitung, a paper in the German language published in Odessa.

MOTOR CARS.

"Motor cars are coming largely into use for communication between country houses and the nearest town or railway, and also for inspection of estates. At present motor cars are supplied to Odessa by France, the United States, and Germany. I believe that no British patterns are on sale. For long runs the 12-horsepower machine is bought; for estate inspection, etc., the 8-horsepower engine. Anyone who wishes to try his luck in south Russia should remember that the roads are bad and repairing shops may be far away, so that strength and simplicity are more than ever desirable. Water is often difficult to obtain, so that steam motors should have water space sufficient for long runs without need of replenishment.

"No condiments are admitted into Russia if any traces of salicylic acid can be detected."

THE OIL INDUSTRY.

A correspondent of the London Times writing from Moscow says:

A naphtha crisis is beginning to make itself felt throughout the central and southeastern provinces. Many steamboat owners and small manufacturers are ruined. The price of mazout, or naphtha residue, which is practically the only fuel used in this region for railway, shipping, and industrial purposes, has risen at Baku from 5 to 30 copecks a pood, and the supply may entirely cease, because the oil concerns will probably be compelled to close owing to the insecure condition of the country. Indeed, unless the Government authorizes them to organize a private militia for the defense of their property, it is certain that they will suspend further operations, and thereby completely ruin the enormous mill industry of Moscow, the steamboat companies on the Volga, and a large number of private railways,

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besides depriving the treasury of the annual £10,000,000 derived from the excise. The crisis comes at a most awkward moment for the Moscow mill owners, who have enormous Siberian and Government orders on hand. Siberia was entirely bereft last year of supplies of textiles owing to the monopoly of the railway for military purposes, but this summer the old waterways via Perm and Cheliabinsk have been reopened, and were utilized on a huge scale till the scarcity of mazout made itself felt. It is feared that the great fair at Nijni Novgorod, which opens next week, will be seriously affected.

RETALIATORY DUTIES RESCINDED.

OFFICIAL ANNOUNCEMENT OF DISCONTINUANCE—ORIGIN AND EFFECT OF THE DISCRIMINATION.

Official announcement that the Russian Government has ordered that the levying of discriminating import duties on a number of articles, the products of the United States, be discontinued, lends interest to figures presented by the Department of Commerce and Labor through its Bureau of Statistics, showing the total imports into Russia from the United States during the calendar years 1900–1904, inclusive, as well as the imports during the period 1900–1903 into Russia from the United States of the articles affected by the adverse tariff legislation.

The application of the higher discriminating rates dates back to the beginning of the year 1901, when, in retaliation of the countervailing duty imposed upon sugar of Russian origin in accordance with section 5 of the Dingley tariff, the Russian minister of finance ordered the application of the penal tariff rates to imports of manufactures of cast iron, of hand tools, machinery, and numerous other articles classed under the general head of manufactures of iron and steel. These articles, which were subject until then to the same conventional rates as were paid by like articles coming from Germany and other European countries, became subject to rates from 30 to 50 per cent higher.

In May of the same year an order of the Russian minister of finance raised the rates on white rosin, pine pitch, and brewers' pitch by 20 per cent, and that on velocipedes by 30 per cent, which higher rates have prevailed since.

COMMODITIES AFFECTED.

In order to be able to determine the origin of the articles affected, the Russian Government also ordered the presentation of certificates of origin in case the goods bore no trade-marks or other proofs of their real origin. It is interesting to note that the total imports into Russia from the United States, as shown by the official trade returns of the Russian Government, show but little the effects of the adverse tariff legislation. Thus the total imports from this country are stated by the Russian returns as follows:

1900	$22,748,000
1901	17,984,000
1902	20,574,000
1903	32,531,000

Preliminary figures for the year 1904, showing the imports from the United States into Russia over the European frontier only, are

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$32,163,000. The corresponding figures of the Bureau of Statistics, showing the total exports from this country to Russia during the same calendar years, are as follows:

1900	$8,664,270
1901	7,207,995
1902	13,835,953
1903	18,994,548
1904	17,823,856

While the figures of the two Governments, measuring the same trade movement for the same period, show wide discrepancies, neither of them discloses any serious effect of the discriminations upon the growth of the general trade movement. The main reason for this phenomenon is that the bulk of imports into Russia from the United States is made up of raw cotton, the imports of which from this country for the years in question appear to have been as follows:

1900	$18,417,000
1901	12,467,000
1902	13,595,000
1903	24,338,000
1904	24,060,000

By comparing the values of the cotton imports with those of the total imports into Russia from this country, it is seen that the larger or smaller size of the total import figures for the respective years depends mainly upon the magnitude of the figures showing the cotton imports from the United States during the same periods.

IMPORTS FROM THE UNITED STATES INCREASED.

An analysis of the figures showing the imports from the United States of the various articles affected by the discriminating tariff legislation furthermore shows that these imports have, on the whole, increased during the period in question. Thus, the imports of manufactures of cast iron increased from $19,955 in 1900, which, for purposes of this comparison, may be taken as a normal year, to $45,722 in 1903; hand tools, from $15,315 to $64,532; machinery, from $223,529 to $338,694, while imports of the various articles under the general head of manufactures of iron and steel increased from $45,373 in 1900 to $363,555 in 1902, and fell off to $67,555 during the following year. The same is true of bicycles, the imports of which, from $10,836 in 1900, increased to $43,087 in 1902, but fell to $30,377 during the following year. The imports of the articles under the general head of naval stores more than doubled—from $186,552 in 1900 to $404,226 in 1903. The combined figures of imports from the United States of the articles subject to discriminating duties show an increase from $501,558 in 1900 to $951,106 in 1903.

THE OFFICIAL ORDER.

The American chargé d'affaires ad interim at St. Petersburg reports by cable, under date of the 15th instant, that he has received the following note from the Russian minister of foreign affairs:

"His Majesty the Emperor, following a report from the minister of finance, on September 10, issued the following order:

"'1. To abrogate the rules in force relative to the levying of sup-

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plementary import duties on products of American manufacture provided for by articles 82, 150 to 153, 167 (section 2), 173 (section 3), of the general customs tariff for European commerce as well as those providing for the presentation to the customs offices of documents certifying the origin of the products in question; and

"'2. To publish the present imperial order in the Bulletin des Lois, and to inform by telegraph the customs offices thereof, with instructions to put it into execution without delay.'"

ACCORDING to recent newspaper reports a railroad between Tashkend and Omsk, Russia, is to be built. The minister of communications has granted 1,200,000 rubles for this purpose.

A NEW line of railroad is to be built between Tashkend and Tomsk by the Government.

SPAIN.

SAFFRON AND SUGAR.

LARGE INCREASE IN THEIR EXPORT.

Consul-General Ridgely, of Barcelona, reports that there has been a large increase in the exportation of saffron during the first six months of the present year. He says:

A fairly good quality of saffron is produced in Spain, and there has been for some years a steady export demand for a large percentage of the crop. The first six months of the present year show a considerable increase in the exports of saffron. While in 1903 and 1904 about 27 tons were sold abroad, the statistics for the first six months of the present year show an increase of 18 tons over the same period of the previous two years. As the export price of saffron is about 100 pesetas a kilogram, this would mean an increase of 1,800,000 pesetas in the export sales of the product. This large increase is principally due to the light crop this year in France, and, because of the large imports into that country from Spain, certain members of the French Chamber of Deputies are already preparing a measure to be presented at the next session of the Chamber looking to the increase of the import duties on saffron.

Consul-General Ridgely further reports that during the period from January 1, 1904, to July 31, 1905, 309,152 tons of sugar cane were delivered to the factories for consumption, this being 48,121 tons more than for the same period of last year. During the six months ending June 30, 1905, the factories produced and warehoused 26,917 tons of cane sugar, this being 6,268 tons more than for the same period of 1904. There are about six big cane-sugar factories in Spain, and all of them are located in Andalusia, the most important being "La Fábrica de Nuestra Señora del Rosario" at Salobrena, province of Almeria.

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RAILWAY CONSTRUCTION.

Consul-General Ridgely, of Barcelona, writes that the provincial council of Pamplona, in the Province of Navarra, northern Spain, have taken and are about to carry into effect a resolution of much importance. They will grant a considerable subvention to any national or foreign company undertaking to construct light railway lines in said Province. The area of the Province of Navarra is approximately 2,500,000 acres. The provincial council of Barcelona has also forwarded to Madrid a petition asking for permission to raise a loan of 14,000,000 pesetas ($200,000) for the purpose of building additional high roads and light railways within the Province. American firms desirous of obtaining concessions for constructing such railways should apply to the presidents of the provincial councils of Pamplona and Barcelona. The proper form of address is "Presidente de la Diputación Provincial de la Provincia de Barcelona or (Pamplona)."

ANIMAL INDUSTRY.

INCREASE OVER THE LAST CENSUS.

Commercial Agent Price, of Jerez de la Frontera, writes about certain animal industries in Spain, and gives valuable statistics about horses, mules, and the production of milk. The report follows:

The Spanish census of 1904 shows that 359,409 persons in Spain own 169,877 horses, 183,225 mares, and 60,284 colts. There are 98,043 carriage, 55,895 saddle, and 105,295 draft horses. There are 725,708 mules—403,359 carriage, 3,659 saddle, and 257,454 draft mules. There are 100,060 brood mares and 1,579 stallions.

The war department owns 18,874 horses, 127 mares, 1,598 colts, 932 mules, and 1,354 jenny mules.

The above shows an increase of 200,000 head over the census of 1897.

WORLD'S MILK PRODUCTION.

It is estimated that the total weight of cows' milk produced in the world is 26,400,000 hundredweight, distributed as follows: United States, 6,100,000 hundredweight; Russia, 3,500,000; Germany, 3,000,000; France, 200,000; England, 200,000; Austria, 1,700,000; Italy, 1,450,000; Canada, 1,300,000; Holland, 1,200,000; Sweden and Norway, 800,000; Switzerland, 700,000; Denmark, 600,000; Belgium, 600,000; Australia, 550,000; Spain, 500,000, and Portugal, 500,000.

The production of milk in Europe is 18,450,000 hundredweight from 45,000,000 cows. The number of milch cows in the world is 63,800,000—15,940,000 in the United States and 10,000,000 in Russia. There are only 6 head of horned cattle in Spain to each 2½ acres of cultivated land, while in France there are 34 head and in England 56. This shows the poor condition of cattle breeding in Spain, and explains the constant increase in the price of butcher's meat for public consumption.

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SWITZERLAND.

THE TOGGENBURG GOAT.

MILK FREE FROM DANGEROUS GERMS.

To meet the requests of many American correspondents desirous of information regarding the value of the Toggenburg goat, Consul-General Peters, of St. Gall, Switzerland, transmits the following report, which was prepared at his request by Mr. Wissman, director of the cantonal department of agriculture of St. Gall:

Toggenburg is in a long and fertile valley of the Thur, and is a district within the Canton of St. Gall, long famed for its goats. The milk of the goat is rich in quality, and keeps quite as well as cow's milk. It sells for 3.5 to 3.8 cents per liter (1.0567 quarts). These goats breed at a year old, the time of gestation being five months. The food in summer consists of grass and shrubs, but in winter, if the milk is to continue rich in quality, a small quantity of grain and hay must be given, and the temperature of the stall should be kept at from 57° to 62° F.

FEEDING AND HERDING.

In regard to the amount of pasture land required for the support of this animal, it is computed that from 6 to 8 goats will need as much as one cow, and that one man can manage from 40 to 50 goats. Generally speaking, the milk of the cow is more popular, but for children the goat's milk is in greater demand, as tuberculosis is hardly ever found in these hardy animals. The milk of the goat makes an excellent cheese and fairly good butter, but as to the latter the milk of the cow retains its preeminence. The meat of the young goats, from 5 to 12 weeks old, is considered a great luxury. Indeed, it is often mistaken for vension, and sells for from 29 to 39 cents for 2.1 pounds. This compares very favorably with the average price received in Switzerland for beef, which is 33 to 37 cents for 2.2 pounds.

The average clip on long-haired goats is about 4.4 pounds. The hair is not very marketable, but is used in some instances for ropes, which are very strong and defy the action of water. The skins are worth from 29 to 58 cents each, but the finest and best bring as much as $1.35 each.

If well cared for, these animals will give milk from their first to their tenth year, when they decrease in flow and finally dry up. Ordinarily they will produce milk for eight months in a year. The price of these animals is higher in the spring than in the fall, but average for a good one from 1 to 3 years old (male) in the fall $9.65 to $19.30. Females of the same age bring $7.72 to $9.65; 4-year-olds bring as high as $13.51.

INTERESTED parties in England are doing everything in their power to prevent a strike among the cotton-mill hands of Lancashire. It is hoped that the matter may be adjusted by means of arbitration, under the clauses of the conciliation act.

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TURKEY.

FOREIGN COMMERCE.

RELATIVE POSITIONS OF COMPETING COUNTRIES.

Vice-Consul Ojalvo, of Trebizond, furnishes detailed report of commodities imported into Turkey and especially those which pass through Trebizond. A considerable portion of the imports is taken to Persia. The vice-consul states that the superiority of American goods is generally admitted, but that objection is made to the higher prices asked for them compared with those of other countries. He suggests to American manufacturers methods calculated to overcome existing obstacles to American trade. His report follows:

During the first six months of 1905 goods worth $4,943,647 passed the custom-houses of Trebizond. Of these a large part were destined for Persia, $1,458,000; Erzerum, $1,270,000; Van, $671,000; Bitlis, $396,000. The rest, about $150,000, were consumed in and about Trebizond. The imports consisted of calicoes, cotton goods and yarns, hardware, sugar, matches, hides, candles, nails (60 per cent from the United States), woolens, petroleum, prints, copper, sacks coffee, tea, iron, raw cotton, sewing machines, fezzes, leather, paper, etc.

Trebizond and the interior of Turkey were supplied by the following nations in the amounts set over against each:

England	$709,896	United States	$45,720
Russia	240,692	Greece	15,602
Turkey	907,645	Bulgaria	40,620
Egypt	13,724	South America	42,000
Austria	571,696	Holland	5,070
Germany	160,895	Denmark	1,020
France	470,864		
Italy	100,074	Total	3,486,132
Belgium	160,604		

Of the $1,457,514 that were passed on to Persia, the share of the several countries named is here given:

England	$570,620	Italy	$105,470
Turkey	206,340	America	9,671
Austria	302,600	Russia	1,721
Germany	100,472		
France	160,620	Total	1,457,514

These consisted of iron, copper, paper, matches, alcohol, window glass, cloth, cotton goods, tea, silver, machinery, etc.

IMPORTS FROM THE UNITED STATES.

The imports from the United States to Trebizond—$45,720—consisted of nails, barbed wire, paints, stoves, hardware, and lamps. It is interesting to note in this connection that most of the goods ordered from the United States were ordered by the United States vice-consul at Trebizond, who took upon himself the responsibility to practically guarantee payments. The experiment suggested by the vice-consul of collecting through the Ottoman Bank has been so successful that

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further business is sure to result. A trial order for pumps, cloth remnants, saddles, carriages, and a new order for stoves has been sent for several parties, while a commission merchant, who is beginning to take orders for American goods, has received trial orders for cotton goods, cotton yarns, files, iron wire, and varnishes.

SUPERIORITY OF AMERICAN GOODS.

The superiority of American-made goods is not denied by dealers nor by the buyers, but both parties object to paying the prices asked. Another drawback to the sale of American goods in large quantities is the fact that whenever a merchant happens to receive any American article he always expects to make from 50 to 60 per cent on it. If you ask why he expects so large a profit from American goods and less for articles from other countries, the answer is "No other dealer has the same to sell, and who knows when I shall order again?" This certainly hinders the introduction of our manufactures. The way to overcome this is to acquaint the people and the dealers with American-made articles and their prices by advertising in every city in Turkey. Instead of spending large sums in catalogues and papers, with little or no result, establish a salesroom in each city for a period of five years. This will teach the merchant and the customer to use American goods; hence will lead to trade.

Manufacturers' associations might raise $40,000 or $50,000 and establish salesrooms under the supervision of United States consulates, if there be any, stocking them with about $2,500 worth of American wares. The American consul in the place or near by could select a bright young man possessing some knowledge of the English language and put him at the head of the business with one assistant, the first to receive $600 and the second $300 a year, with contract for five years. If we establish seven branches it will mean an expenditure of $10,500 a year, which includes rent for seven stores, $4,200, and salaries, as described, $6,300.

These $10,500 no doubt will be covered by the reasonable profit which is to be added to the goods. Let us suppose that three of the stores will be unsuccessful, with a loss of $4,500 a year, that in face of the fact that a salesman receives as much for his traveling expenses, will mean practically nothing when compared with the good results that are reasonably sure to follow.

Some kind of compensation ought to be given to those employed in the American consulates for what they accomplish, either by recording their efforts to open markets for American goods or by paying them for their services. In the absence of any kind of reward no one but an American citizen, one bound to advance the interests of his country, will be willing to do much without pay.

COMMERCE AT CONSTANTINOPLE.

The commercial expert attached to the German consulate-general at Constantinople, in a report to his Government, discusses the importations of manufactured goods at that chief center of Turkish trade, a translation of which is forwarded by Consul-General Guenther:

The most important branch of imports to this country is textiles, especially cotton cloths and yarns, also silk goods. In this line of

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manufactures Italian products have made the greatest progress within the last ten years and they are well established in the Constantinople market. Last year some Spanish printed cotton cloths, cheap flannels, and a specialty in Zephir cloth, called Basma, have been introduced here which have become very popular. As labor wages are lower in Spain than in Italy, Spanish cotton manufactures may make strong competition here to those of Italian production. Russia chiefly supplies this market with flour, alcohol, and soft sugar. For the last year and a half the manufacturers of Lodz (Russia) have made strong efforts with successful results in disposing of their printed cotton cassimeres for men's clothing. They would do still better if their prices were made in francs and c. i. f. Constantinople, instead of rubles-loco factory Lodz. Russian rubber shoes have almost crowded out of this market the American article.

AMERICAN SALES.

The sales in American agricultural machines and implements have also suffered somewhat from Russian competition, but the American Singer sewing machines still maintain the position of a monopoly in all the markets of the Orient. This company's main office at Constantinople directs its business in Egypt, the Balkan States, and all of Turkey. The Singer Company has a well-organized sales system which extends to the smallest places and adapts itself fully to the wants and wishes of the consumers. Its mode of selling on installment payments is very popular. Belgian goods are noted for their cheapness and poor quality. Austria-Hungary has made strenuous efforts to extend its trade in this market and did well here last year. Much of this is due to the energetic activity of the local representative of the Hungarian Commercial Museum, whose sales last year increased by 50 per cent, amounting to $315,000, whereas seven years ago they were but $33,600 per annum.

FRANCE, ENGLAND, AND GERMANY.

France is holding its trade fairly well excepting in silk goods, which had to give way to the more progressive Italian silk manufactures. Of late the Italian silver jewelry and bijoutry articles have become a successful and energetic competitor of the German manufacturers (Pforzheim) in that line. The latter had better look sharp so as not to lose their foothold here. England's trade with Turkey has remained rather passive for some time, but is picking up again. As before, English staples, like the T cloth, army cloth, fine yarns, cheap pocket handkerchiefs, still dominate in Turkish markets. Germany is working slowly but surely ahead in textiles against Italy, Austria, and England, and competes successfully with the latter and with Belgium in the sale of small iron ware.

MESOPOTAMIA.

EVIDENCES OF COMMERCIAL ADVANCEMENT.

A correspondent writing to the Chemnitz (Germany) Tageblatt from Bagdad, that part of the Ottoman Empire still known as Mesopotamia, states many improvements are being made which can be distinctly described as modern. The Vilajet Mossul, on the middle Tigris, is

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extremely rich in all agricultural products, and during the past ten years much has been done to introduce rational methods of farming. The Bedouins are becoming less nomadic in their habits and are leaving the neighboring steppes to become permanently domiciled upon the land, which is being irrigated and reclaimed from the state of waste which has characterized it for centuries. The projected Bagdad railway, a German enterprise, will pass directly through this country and bring it within easy reach of the commercial world. Two new steamers, built in England, are now plying the Tigris. They are owned by a native company and are fitted up with all modern appliances, such as electric light, etc. A reconstruction of the ancient dams of Hillah is also being planned. All that is necessary to make this country one of the most prosperous in the Orient is the advent of the railroad above mentioned.

FIGS AND RAISINS.

LARGE INCREASE IN THE RAISIN CROPS.

Consul Norton, of Smyrna, reports a large increase in the raisin crop, compared with the crop of 1904. He writes:

The present prospects of the raisin crop are favorable. They compare, in quantity, as follows with the results of last season: In 1904, sultanas 34,000, red raisins 6,500 long tons; estimate for 1905, sultanas 48,000 to 53,000, red raisins 8,500 to 9,500 long tons.

In view of the rapid extension of the culture of the vine, and also of the fact that the yield of sultanas in the season of 1903 reached a total of nearly 65,000 tons, the estimated production for the present season must be reckoned as a good average one. Stocks of last year's fruit are exceedingly reduced. It is estimated that there remain in this country barely 1,500 tons of raisins, the greater portion consisting of low-grade and deteriorated wares, fit only for distillery purposes. Last year at this time the stocks carried over from the preceding crop of 1903 amounted to nearly 10,000 tons. Rain affected the quality, although not the quantity, of both the raisin and the fig crop, and will have a bearing on future price conditions. About one-fifth of the local fig crop is affected this season by the malady here termed "bassara."

PRICES AND COMPETITION.

Owing to the prospect of a small crop of raisins in Spain, a smaller output of fruits generally in European countries, and to the reports current that the Californian crop of raisins is likely to be 25 per cent short, prices here are ruling at a moderate level, somewhat higher than the extent of the production this year would have ordinarily justified. Owing to keen competition in the carriage via British and European ports, actual rates on figs and sultanas for the United States seaboard are practically as low as those ruling for London, Liverpool, Hamburg, etc. A ton of sultanas is carried to Liverpool at 27s. 6d. per ton, as against 30s. to 33s. to New York via British or European ports. In certain cases of direct steamers to New York, rates as low as 17s. 6d. to 20s. per ton are accepted.

Messrs. Karaman Brothers, one of the leading Smyrna houses engaged in the exportation of dried fruits, have kindly placed at my

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service their general review of the condition of the raisin and fig crop of this district, compiled at the close of the past month. It furnishes much valuable statistical matter, as well as useful comparisons between the crops of the different localities for 1904 and the estimated crops of the season upon which we are just entering. Their review includes also a tabular statement of the exportation of raisins and figs for the past ten years.

The review is on file at the bureau of manufactures, where it may be seen by interested parties.

LICORICE ROOT MONOPOLY.

Consul Norton further writes that the Ottoman Government is engaged upon the study of a project which has been submitted by a group of Turkish capitalists with regard to the establishment of a monopoly for the purchase and exportation of licorice root. This project is now under careful study, and at any date the world may see in the Empire a licorice-root monopoly similar in its management to the existing tobacco monopoly. This proposed monopoly will interest to a greater extent the importers of licorice paste and licorice root in America than those of all the rest of the world combined, as the total export of licorice to America from Turkey in Asia amounts, according to the latest available data, to 52,429,861 pounds, while the entire import of licorice into the United States is 88,550,000 pounds.

PERSIA.

OBSTACLES TO TRADE.

INQUIRIES BY A GOVERNMENTAL COMMISSION.

The commercial possibilities in Persia are not considered very extensive based on what is now known of that country, but much has been added to the sum of knowledge from the report of a commission which visited southeastern Persia during the latter part of 1904 and the first months of 1905 in behalf of the Indian government. The commission was to inquire into the following matters:

1. Personal safety of traders and safety of transit for merchandise.
2. Means of transport and condition of routes, roadways, etc.
3. Risk of losses through traders failing to fulfill contracts.
4. Information as to the existing means of financing trade and as to the opening of an exchange bank.
5. Full particulars as to import, octroi, and transit dues.
6. Samples of and particulars as to goods current in southeast Persia, with country of origin and relative prices.
7. Feasibility of establishing ginning, pressing, or spinning factories in the cotton-growing districts.
8. Prospects for extending Indian tea trade in Persia.

OBSTACLES TO IMPORT TRADE.

In all of these matters except the last American manufacturers will have no little interest, and the scope of the mission's inquiries is suggestive of the obstacles that at present prevail in this region to the

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extension of foreign trade. Some idea as to the value of the results to be expected from the mission's investigation may be gained from the following brief synopsis of the results of a similar mission undertaken by T. J. Greensill, in behalf of the Indian government, in 1903–4. Mr. Greensill had previously gone to Persia on a business venture with a large caravan of Indian tea, and his report, therefore, has the merit of being based upon actual business experience as well as upon interviews and investigations. The lines of goods that in his judgment are best suited to Persian import trade at present are glassware, enamel ware, piece goods, tea, indigo, spices, and haberdashery; while asafetida, wool, hides and skins, Kanevez silk, shirkhesht, and almonds are the best articles to buy in return. As to the trade in Persian carpets, Mr. Greensill characterized it as "fair if you know the business," but shrewdly advised those who were not experts to keep away from it. There is no market for cigars in Persia, he stated, while foreign cigarettes would have to compete with the native product, selling at from 2 rupees 8 annas to 3 rupees per thousand.

TRANSPORTATION AND PROTECTION.

While transport is slow and expensive, the Nushki-Seistan route he reported to be safe, goods now going as far as Nushki by rail, the extension of 91 miles from Quetta to Nushki having been completed. From this point transport is by camels through Baluchistan to Killa Robat on the Persian frontier, a distance of 368 miles, and then by camels or mules for the remaining 113 miles to Seistan.

As to the safety of merchandise en route Mr. Greensill's experience as a trader was decidedly interesting. As he stated it, he would have been paid just the same whether his goods got through safely or were all stolen en route. At Seistan he lost some carpets, but the Persian authorities made good the loss within a week. One of his horses was stolen near Meshed and a complaint through the consul resulted in prompt payment for that also. If anything is stolen the village in which the theft occurs is compelled to make it right.

Most of the cotton goods worn in Persia comes from England or Russia, and in this field it is doubtful if America could compete, especially as the Indian mills seem disposed to have a try at the market. The Persians like a bright, showy article which need not be very durable so long as it is cheap. Some of the most popular British lines were imitated by the Russians, even to the lettering and floral decorations on the green paper labels, but the quality of the imitation was greatly inferior. Cheap looking-glasses would sell in Persia, and rough shoes are imported in considerable quantities, especially from Russia.

THE BRITISH CONSUL at Jerusalem says that, owing to the large influx of foreign tourists to Palestine, much money is brought thereto, which, in addition to the demands of the travelers themselves, has greatly increased the importation of many articles, such as machines, iron bedsteads and furniture, household goods, and articles of luxury. The native population obtaining more money takes to the building of better structures, thereby causing a demand for building materials and furnishings.

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AFRICA.

ABYSSINIA.

PROMISING OUTLOOK.

INQUIRIES BY SPECIAL COMMISSIONS FROM COMMERCIAL NATIONS.

Mr. Edward James Cattell, in a lengthy article, under the caption "Around the World," published by Commercial America of Philadelphia, furnishes interesting information about commercial progress in Abyssinia, which is reproduced in the following paragraphs:

Recent events have brought a distinct change for the better in Abyssinian conditions and outlook. This new importance of Abyssinia has been already recognized by several of the great powers. Within a year special commercial commissions, with wide powers, have visited Abyssinia from the United States, Germany, Austria-Hungary, and Italy, while less important commissions have emanated from the United Kingdom and minor European powers. The United States, however, it is interesting to note, enjoys the distinction of being the first great power to establish diplomatic relations with Abyssinia on a commercial basis, and wholly with the desire to extend and expand trade relations. The treaty of commerce and friendship signed by Consul Skinner on the part of the United States with Emperor Menelik, and ratified on August 2, 1904, or little more than one year ago, in a real sense regularizes trade relations between two widely separated countries. For while the United States has for years supplied the larger part of Abyssinian imports—American gray cotton sheetings being practically one-half the import trade of the country, and running to more than 10,000,000 yards a year—these imports have generally traveled first to a Continental port, thence to the English port of Aden on the Gulf of Aden, afterwards crossing to either a French or English port in Africa, and thence, through the instrumentality of Indian merchants, have been forwarded to points of distribution in the heart of the Abyssinian highlands, not one yard finding record as a direct export from a United States exporter or manufacturer to the Abyssinian buyer or distributer.

OLD METHODS ABOLISHED.

Another feature of the first importance in present-day conditions is that a monopoly which formerly existed for the sale of cotton goods has been abolished, leaving an open market for all who wish to test its value. This broadening of the methods of distribution promises to have a far-reaching influence, because when imports were concentrated in the hands of one or two individuals or business organizations such importers were in a position to force low prices for natural products. Barter is the prevailing form of trading, and as the favored importers were the only sellers of what the people wanted to buy, they were also the only buyers of what the people had to sell. Year by year natural greed forced these foreign sellers to demand a larger

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and still larger portion of natural products in exchange for a steadily decreasing quantity of imported goods. Such a system worked in two ways to the distinct injury of foreign trade, curtailing the purchasing power of the people, and thus denying them comforts, at the same time limiting demand for foreign goods and incidentally lowering the volume of such goods supplied to exporters in the producing country. Here, then, we have a nation which, while presenting many features in individual character and national habit of life that have remained unchanged for forty centuries, to-day presents to the world what is practically a new face in matters commercial, both as regards productive power and consuming capacity.

What, then, can be said of Abyssinia, or Ethiopia, which is to-day using as money cartridges and small bars of salt, side by side with a new coinage of silver, stamped at Adis Ababa, the capital city, by machinery built in Stettin, Germany, on the order of a French merchant, and carried east on an English steamer; this country, 50 per cent larger than the German Empire in Europe, and yet possessing not one mile of railway and only one short wagon road; this wide land which shows but one iron bridge, although cut by countless river gorges—gorges which at certain seasons block transportation for days at a time.

GEOGRAPHICAL COMPARISONS.

To bring the physical face of Abyssinia clearly before the mind, it may be helpful to compare the African Empire with Texas, in the United States, or France, on the European continent, in the latter case, however, increasing the area 60 per cent. In the American comparison, between Texas and the Gulf should be interposed territory equal in area to that of the State of Utah to represent the Italian colony of Eritrea, on the Red Sea; territory equal to that possessed by Maryland and Massachusetts to represent the French colony on the Gulf of Aden and the Strait of Bab-el-Mandeb, and territory equal in extent to that possessed by the State of Missouri to represent British Somaliland, separating Abyssinia from the Gulf of Aden. In the European comparison of Abyssinian territory, between France and the ocean must be placed a body of territory double the area of Portugal to represent the Italian colony, territory twice the size of Belgium to represent the French colony, and territory four times that of Switzerland to stand for the British colony.

The Abyssinian uplands bear a striking resemblance to Mexico in the matter of altitude, temperature, and characteristic flora. As in the case of Mexico, there is a vertical disposition of zones, due to climatic changes, and a somewhat irregular disposition of rainfall. All European and American cereals can be grown, and coffee of the finest quality is raised. Indeed, the Kaffa Province is the home of the coffee shrub, which takes its name from that section.

NATURAL RESOURCES.

The Abyssinians can not truthfully be called an agricultural people, the bulk of such work being in the hands of the Gallas, a subject race, but as pastoralists they hold a high record, flocks and herds representing the great wealth of the country. Many districts, however, are known to contain iron, coal, and copper, while gold is washed in the rivers. Limestone also abounds, but industrial development halts

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until coal in larger quantities is uncovered. Indeed, the fuel question plays a most important part to-day in the life of the whole people, even determining the location of their towns. These towns are, in fact, nothing more than camps. Even the capital city, now claiming 50,000 inhabitants, has shifted its location like other towns, moving to a new site when all the available wood within hauling distance had been cut off.

Climatic conditions prevailing throughout Abyssinia add to its producing capacity. Varying altitudes give conditions which permit of hard work in the open air at all seasons, although the land is situated close to the Equator. A notable feature is that at sunset a fall in temperature takes place of from 35 to 45 degrees. In the deeper valleys intense heat is the noonday condition. An important range of mountains intercepts the rain-bearing clouds brought by the trade winds from the Indian Ocean, raising the rainfall from an average of 30 inches throughout Abyssinia proper to 50 inches in the Galla uplands.

CUSTOMS OF THE PEOPLE.

The population of some 9,000,000 is widely scattered, seldom concentrating into towns larger than 5,000, save in the case of the capital, Adis Ababa, with 50,000, and Harrar, the chief trade and distributing center, with 35,000. A large proportion of the inhabitants of Abyssinia are Christians. Service in the churches contains many features common to the time of King David. The situation of Abyssinia between the Nile and the Red Sea has brought about a mingling of various races, the Hamites from the north, the Himvaritic Semites from Asia, and the negroes from the south. The present race are of medium stature, varying in color from brunette to black. The language of the upper classes and of the court is Amharic, that of the common people Agua, an Hamitic tongue. Polygamy is practiced. Such educational propaganda as is carried on is wholly in the hands of the clergy. The wife is a beast of burden, wood in many places being sold by "the woman's load." The people eat much raw meat, and are fond of strong and pungent perfumes and bright colors. They indulge rather freely in alcoholic beverages but very few use tobacco. Nearly every one carries a Robinson Crusoe straw umbrella which can not be closed. Although the people are fond of jewelry, gold can only be worn by the royal family.

POSSIBILITIES OF TRADE.

To emphasize present day interest in Abyssinia, there is the circumstance that through the recovery of the Sudan, Abyssinia's great western neighbor, from the power of the Mahdi and his Mohammedan followers, a serious menace to Abyssinian people has been removed. While agreement among the powers that control over smaller African rulers should be by all the powers acting as one, will encourage investment of foreign capital in Abyssinia, because the strongest influence working against this investment of late years has been a fear that upon the death of Menelik the country would return to a state of internal unrest or revolution, wherein the substance of the people would be wasted and their time consumed in devastating warfare. The possibilities of Abyssinian trade, and also trade in countries similarly constituted may be illustrated by an incident of recent record in the Sudan. A soldier, passing through Kordofan, presented a red hand-

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kerchief to one of the natives. This started a demand for articles of the same character, but the people were poor, had no money wherewith to buy. Stimulated, however, by their newly awakened appetite for a luxury, the natives soon discovered that a certain gum easily obtained in the neighborhood had an exchange value in these red handkerchiefs. In a short time an asset for years ignored was converted into a means by which the tastes of the people were gratified, and an absolutely new market created for surplus product of another land.

A NEW BANK.

IMPORTANCE OF THE ENTERPRISE.

Consul Masterson, of Aden, Arabia, writes that for several years past there have been rumors of different attempts of starting a bank in Abyssinia, and it is well known that several expeditions have been made by parties witb that end in view, but each time King Menelik, or some other influence, would interfere with the carrying out of the scheme. But at last all obstacles have been removed, and the Bank of Abyssinia is an assured fact. On May 30, a Khedival decree was issued sanctioning and chartering the new bank; the signatories of the act of association being Sir Elwin Palmer, governor of the National Bank of Egypt, and other persons connected with that institution. The capital of the new Bank of Abyssinia is £500,000 in 100,000 shares of £5 each. Its principal place of doing business will be Adis Abeba, but its real headquarters will be in Cairo and, according to its incorporation, it will be governed by the mixed codes jurisdiction of Egypt.

No subscription of capital is called for, the full amount having been already subscribed, and it is believed that the National Bank of Egypt itself provided the major part of the funds. The charter assures to the Bank of Abyssinia the privilege of issuing bank notes, which will circulate at legal tender, the minting of the Abyssinian coinage and power to engage in all financial, industrial, and commercial transactions whatsoever. This event, in view of the daily growing importance of Abyssinia, places Egypt and through her England, in a very influential position in the development, both commercial and industrial, of that new country, and this new enterprise will go far toward counterbalancing the influence acquired by France through the construction of the New Ethiopian Railway.

IRON AND STEEL.

PROSPECTS FOR AMERICAN MANUFACTURERS IN ASIA AND AFRICA.

Referring to an article which recently appeared in a leading New York commercial newspaper, covering the vastness of the iron and steel output of the United States and its assured development in the immediate future, Consul Winter, of Annaberg, submits the following report on the opportunities which Africa and China offer for the products of our iron and steel industries, which, according to the journal referred to, are yet in their infancy.

In Africa and China railroad building is just beginning. Within the next few years both of these countries will furnish an excellent

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market for steel rails and rolling stock. The great weakness of China lies in her lack of transportation facilities; for, gigantic as are her resources, she is unable to marshal them.

At present China has only 5,000 miles of railroads. Yet it has 400,000,000 population, or nearly one-third of the entire human race. The Empire has 5,000,000 square miles of territory. The field for the building of railroads in this immense territory is almost unlimited.

The same is true of Africa. The United States is in a position to supply China and Africa with all the steel and iron they can use, and can supply these products at prices with which the rest of the world can not compete. The future evidently holds much in store for the steel and iron industry of the United States.

BRITISH AND AMERICAN EXPORTS.

COMPARATIVE FIGURES ON RAILWAY MATERIALS.

While upon the subject of iron and steel exports, especially rails, the Bureau of Manufactures offers, as a further elucidation of the matter of Consul Winter's report, the following statement, showing the exports of railway materials from the United Kingdom, taken from British official returns, and the United States, as given in the returns of the Bureau of Statistics, Department of Commerce and Labor, for the year 1904. The official publications of the other countries do not supply details enough to enable the Bureau of Manufactures to use their figures:

Description.	Exported from—	
	United Kingdom.	United States.
Railway carriages:		
To foreign countries	$618,050	
To British colonies	2,579,250	
Total	3,197,300	
Railway freight cars, trucks, etc.:		
To foreign countries	3,912,300	
To British colonies	2,378,320	
Total	6,290,620	
Total carriages, freight cars, trucks, etc	9,487,920	$3,393,760
Iron and steel rails:		
To foreign countries	5,499,150	
To British Possessions	6,883,170	
Total	12,382,320	4,283,381
Chairs and sleepers	1,157,250	
Railway materials unenumerated	3,650,875	
Locomotives:		
To foreign countries	3,527,380	
To British colonies	5,855,385	
Total	9,382,765	5,261,422
Grand total exports	36,061,130	12,938,563

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Our exports of carriages, freight cars, trucks, etc., are entered under one head. Railway cars, passenger and freight, and "chairs and sleepers," and "unenumerated railway materials" are not given in the returns of the Bureau of Statistics. Of the British exports, the following are the values of the several articles exported to British South Africa: Railway carriages, $2,654,000; freight cars and trucks, $601,600; locomotives, $2,880,000; rails, $1,490,000.

LIBERIA.

OUR TRADE MAY BE REGAINED.

In transmitting the following table, showing the imports of cotton goods into Liberia in 1904, Consul-General Lyon, of Monrovia, adds an interesting historical statement relative to our lost Liberian trade—our lost trade with the entire coast of West Africa, as well as that with Liberia—and adds that the whole trade can be more than regained by an American merchant marine to give us direct communication therewith, together with the necessary efforts of our exporters and importers toward that end—such efforts as the principal exporters and importers of Europe are putting forth to secure as much as possible of the vast trade of West Africa. The annexed table shows imports of cotton goods into Liberia during the fiscal year 1904:

Port of import.	Cases.						Value.					
	United States.	England.	Holland.	Germany.	All other countries.	Total.	United States.	England.	Holland.	Germany.	All other countries.	Total.
Monrovia	8	332	4	744	56	1,144	$16	$12,308	$528	$33,504	$2,012	$48,368
Marshall	....	.....	....	16	.....	16	.....	.....	.....	200	.....	200
G. C. Mount	....	156	....	112	.....	268	.....	8,716	.....	4,880	.....	13,596
Gd. Bassa	4	380	12	148	8	552	224	20,368	436	3,756	320	25,104
River Cess	....	12	....	.....	.....	12	.....	756	.....	.....	.....	756
Sinoe	....	84	....	32	.....	116	.....	4,048	.....	896	.....	4,944
Maryland	....	72	....	36	.....	108	.....	2,152	.....	1,124	.....	3,276
Total	12	1,036	16	1,088	64	2,216	240	48,348	964	44,360	2,332	96,244

This table is a sad commentary upon the loss of our commercial prestige not only in Liberia, but on all the west coast of Africa, as will be seen by what follows relating to the large commercial transaction once carried on between Maryland County, one of the four divisions of the Republic of Liberia, and the city of Baltimore, wherein lived the society whose efforts in the colonization of free American colored people resulted in the birth of the African colony then known as "Maryland in Liberia." The relinquishment of active authority in the colony by the society was followed by an abandonment of commercial relations with the people of the United States, and the trade,

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which up to that time had reached the million-dollar mark, was transferred to European markets.

LOST LIBERIAN TRADE.

In a paper read before the Maryland Historical Society, March 9, 1885, by John H. B. Latrobe, then president of the society in Baltimore, I find the following summary of commercial facts, as they relate to the city of Baltimore alone, during the thirty years of the society's active connection with the colony (Maryland) for which it stood sponsor. These I have arranged after the following manner:

1. Shipments required for the use of the colony and for the trade connected with it, upward of $1,000,000.
2. Shipments for the American Colonization Society, half a million more.
3. Built in the city of Baltimore, under the auspices of the State society, 8 vessels for the trade, at a cost of $113,000.
4. Bought for the trade, vessels already built, at a cost of $22,000, making a total of $135,000 for the construction and purchase of ships.
5. Sailed from the port of Baltimore, in addition to the foregoing, under the auspices of both the Maryland State Society and the parent society at Washington, 52 chartered vessels. As a basis for calculation, the charter of each is put down at $3,000, thus making a lump sum of $156,000 for the charter of vessels alone sailing from Baltimore. To this add the cost of vessels built and bought by the State society for its operation in Liberia and we will have the aggregate of $391,000. It is estimated from the books of the society that from the passage of the act of 1831, which marks the dawn of the society's operation, to the absorption of the colony of Maryland by Liberia proper in 1851, twenty years thereafter, about $2,000,000 were spent under the auspices of Maryland alone.

The loss of the trade in the colony, and in Liberia proper, is due not so much to the withdrawal of colonial authority as to the withdrawal of maritime communication by American ships. The revival of our merchant marine will bring with it a revival of American trade along the whole West African coast.

NORTH AFRICA.

OPPORTUNITIES FOR AMERICAN ENTERPRISE.

Consul Halstead, of Birmingham, sends a suggestive and instructive report based on an interview concerning trade in North Africa. According to the party interviewed there is no reason why American manufacturers should not get a part of the North African trade. Mr. Halstead writes as follows:

While scoring his countrymen for neglecting their opportunities in North Africa, where French and German firms "are much more enterprising," Mr. William Stephens, formerly a schoolmaster in Birmingham and now a schoolmaster to the Khedive of Egypt, when inter-

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viewed by the Birmingham Daily Mail, made some points of interest to American manufacturers. He expressed great surprise that British manufacturers made so little effort to enter the field in North Africa, "which is undoubtedly open to them" and where the French and German firms flood the country with beautiful catalogues of their goods "and whither the latter send their representatives." He said he personally received half a dozen catalogues from Magasin Printemps, a great Parisian general store, and that he was generally "looked up by German commercial travelers on the lookout for an order, however small." The secret of this foreign success seemed to him "to be that the continental trader not only figures out what is required, but is not afraid to go to the expense of sending out a sprat in the way of samples and price lists in the expectation of catching a mackerel in the shape of an order."

Mr. Stephens said he considered it would pay half a dozen of the Birmingham manufacturers to send out a properly qualified man to inquire into the industry and conditions in Egypt. They would thus learn what the natives require. As it is, "French and German goods are often passed off as English, because of the high reputation which British manufacturers have obtained. Birmingham," continued Mr. Stephens, "manufactures quantities of edge tools, but of the hard variety." While the Arab uses edge tools he prefers the "soft kind, because, being a careless individual, he often chips them, and though soft tools are as easily chipped as the hard, they can be much more easily sharpened again," and this is "the sort of thing that the English manufacturer," perhaps I may be permitted to say the American manufacturer, "does not seem to realize."

GOLD IN MADAGASCAR.

Consul Hunt, of Tamatave, writes that there are bright prospects of gold being found in fairly large quantities in Madagascar. He says the exports of gold in 1903 and 1904 amounted 4,211 and 5,423 pounds, respectively. The gold output of 1905 was 5,521.5 pounds, valued at $1,477,500. Quite a large number of persons are prospecting for gold, but most of them are men who have had little experience in prospecting. What is needed is experts. Gold dirt has been found that yields $34.70 per metric ton (2,200 pounds). Gold-bearing reefs and alluvial deposits have been found in various parts of the island. Some have attracted a great deal of attention.

Owing to the numerous electric light and power stations erected in South Africa within late years, various appliances and apparatus for domestic use, handicrafts, refrigerating purposes for dairies, meat storage, etc., could be profitably introduced.

The government of the Cape Colony has given the St. Johns-Kokstad Railway Company a concession for building a railroad between the two points, the length of line being 142 miles.

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COTTON.

THE DOMINANT INDUSTRY.

CULTIVATION, GROWTH, MANUFACTURE AND DISTRIBUTION.

DISTRIBUTION OF THE WORLD'S SPINDLES—EXTENT OF EXPORTS, BY COUNTRIES—DEMAND IN THE ORIENT.

Mr. William Whittam, jr., of Charlotte, N. C., chairman of the export committee of the American Cotton Manufacturers' Association, contributes to the New York Commercial a very instructive letter on the cotton industry and American expansion. He says that the growth, cultivation, manufacture, and distribution of cotton forms a gigantic interest, and that it is the dominant American productive industry. Mr. Whittam's article in part follows:

Few realize how astonishingly it would add to the material prosperity of this country if our over-sea trade in cotton cloths were so increased that we could manufacture at home every pound of cotton grown on American soil. Telling like the sequence of beads upon a rosary are the results which effort will yield in this rich foreign field. To attain such an end will involve hard, expensive, and continuous exertion. In a general way our cotton manufacturers, as a group, have been prating about their ultimate intention to become the leading purveyors of the world's cotton goods, instead of sending abroad the immense quantities of raw material this country now exports.

Leaving glittering generalities for plain fact, it is readily ascertainable that the United States, next to Great Britain, operates more spindles than any other country; that we rank but sixth as exporters of cotton goods and third among the leading nations as importers. From whichever view point this arrangement is examined we can extract no excuse for self laudation.

THE WORLD'S SPINDLES AND LOOMS.

Below are the latest available figures of the cotton-manufacturing industry in practically every country operating cotton mills. Other interesting data is also given:

Country.	Year.	Mills.	Spindles.	Looms.
Great Britain	1904	2,077	49,727,107	719,398
United States	.....	1,201	22,197,522	503,027
Russia	1904	227	6,554,577	154,577
Poland	1897	77	850,000	12,000
Germany	1901	390	8,434,601	211,818
France	1903	420	6,150,000	106,000
Austria	1904	128	3,250,000	110,000
Switzerland	1904	69	1,520,000	17,135

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Country.	Year.	Mills.	Spindles.	Looms.
Italy	1903	500	2,435,000	110,000
Spain	1896	257	2,614,500	68,289
Portugal	1899	15	160,000	.....
Sweden	1904	35	372,000	10,000
Norway	1904	10	87,932	2,574
Netherlands	.....	48	1,236,138	10,000
Roumania	1899	.....	40,000	.....
Greece	1895	.....	970,000	2,100
Smyrna	1894	1	25,000	.....
India	1904	192	5,043,297	44,092
China	1901	15	600,000	1,200
Japan	1901	64	1,332,600	.....
Brazil	1903	100	300,000	15,000
Canada	1902	22	773,538	18,267
Mexico	1903	154	593,900	18,733

IMPORTS OF MANUFACTURES BY COUNTRIES.

Imports by 25 countries are shown in the annexed table together with the values of these per spinning spindle for such countries as have cotton factories.

Country.	Total value.	Value per spindle.
British India	$100,609,000	$19.94
Chinese Empire	83,088,000	138.48
United States	49,524,000	2.23
United Kingdom	35,903,000	.72
Turkey	26,725,000	.....
Germany	22,927,000	2.72
Netherlands	21,195,000	17.14
Argentina	20,114,000	.....
British African colonies	19,548,000	.....
Australasia	17,330,000	.....
Brazil	15,604,000	156.04
Dutch East Indies	15,117,000	.....
Egypt	15,062,000	.....
France	12,073,000	1.96
Switzerland	10,271,000	6.75
Roumania	9,956,000	249.00
Canada	9,555,000	12.36
Straits Settlements	9,488,000	.....

This exhibit indicates that British India is the largest actual importer of cotton goods. It is also generally known that our sales of cottons to that country are most insignificant, being but some $200,000. Yet this market is an open one, and, although a British dependency, no tariff discrimination is made between goods of English origin and those from other countries. It is also remarkable that no evidence is found of prejudice in favor of British manufactures.

We import slightly less cotton manufactures per spindle than Germany, although a comparison of the character of the imports shows our relative position to be not so close in economic value as a first glance would convey. To illustrate, the bulk of our imports consists of high-priced laces, embroidery, hosiery, and similar goods, while the imports of Germany are mostly cotton yarns which are fabricated in German mills into goods to be—some of them at least—sold in our home market.

A close scrutiny of the tabulated figures will reveal many subjects for the serious attention of our cotton manufacturers.

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THE WORLD'S EXPORT OF COTTONS.

In any review of the export trade of the world many things ought to be considered, the more important ones being natural advantages, accumulated experience and prestige, number of spindles and looms, and proximity to the raw material.

Most of these are reasonably well known to those directly interested in the industry. At this time, however, but the relation between spindles and exterior sales will be considered.

There are thirteen manufacturing countries who export manufactured cottons to any appreciable extent. Their relative standing is shown in the subjoined table. The number of spindles in each country is given in the first table.

Exports of cotton goods by countries.

Country.	Total value.	Value per spindle.
Great Britain	$358,232,000	$7.16
Germany	79,524,000	9.42
France	34,694,000	5.64
British East Indies	33,976,000	6.77
Switzerland	38,891,000	25.57
United States	22,404,000	1.01
Netherlands	21,113,000	17.08
Japan	20,224,000	15.18
Italy	16,824,000	6.90
Russia	8,902,000	1.35
Spain	6,088,000	2.33
Austria-Hungary	5,945,000	1.82

CONVINCING COMPARISON.

It is a hateful picture these figures make. Least in foreign marts is the value of the manufactured cottons we send to them measured by the unit of a productive spindle. We also find ourselves perilously near the bottom of the list in actual gross value. The increase in our oversea trade last year was as great as it was astonishing. There is, unfortunately, no evidence of its continuity, although to prevent possible misunderstanding or a likely notion that the record had been overlooked, this passing reference to it is made. One dollar of annual exports per spindle in a normal year against seven for Great Britain is not a pleasant comparison. Switzerland and the Netherlands show large exports per spindle, but their imports are also large, and consist mostly of yarns, which are the raw material for a good many of their manufactures. The most convincing comparison is between this country and England, as there is usually a difference of but some half a cent per pound between the average value of the cloths exported by the two countries. Summed up, we fetch more than we carry, while all our important competitors carry more than they fetch, and it lies within the power of our cotton trade managers to reverse this order. From 1893 to 1903 Japan increased the value of her exports of cotton manufactures to China from $251,363 to $16,126,054, another exhibit alongside which the ups and downs of the American values would lead one to infer that our years of agitation are worthless.

OUR METHODS CRUDE AND EXPENSIVE.

Having reference only to foreign trade in cotton manufactures, it is certain that our present methods are crude and expensive. These will be improved, corrected, and cheapened as our knowledge of a better system is amplified. Two widely different plans for collecting and dis-

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seminating information of this sort are patent: First by individual effort, and second by governmental aid. After many generations of the practical application of the individual plan by English manufacturers and decades of experience by the traders of other countries it has come to be almost universally recognized that to maintain present prestige, let alone to entertain any hope of gain upon rivals, governmental aid must supplement individual effort. Superlatives find legitimate application in any discussion of the world's cotton trade. They are also in place when setting forth the rank this country ought to take as a manufacturer of the home-grown staple.

The greatness of this ever expanding trade, now amounting to over $700,000,000 annually, and our inconsiderable share in it have been shown. The measures taken by our leading opponents in this war of trade have been briefly touched upon. With the united request of the important interests named, backed as this will be by the expressed approval of President Roosevelt and his already given pledge of active support, there seems to be no serious obstacle in the way of the coming Congress arming the American cotton trade as efficiently as the governments of competing countries have equipped their manufacturers to wage the only kind of strife in which the enlightened citizen of this country is at all anxious to engage.

THE YARN TRADE.

INSIGNIFICANCE OF THE UNITED STATES IN FOREIGN MARKETS.

At a meeting of the Southern Soft Yarn Spinners' Association, held at Atlanta, Mr. Whittam delivered an address on the export business in cotton manufactures, which contained information that is not only of general interest, but which should be of great value to manufacturers of cotton yarns. From Mr. Whittam's address the following is taken:

There is too much uncertainty in the cotton-yarn trade of America, due largely to the fact that we are altogether dependent on the vagaries of one market, and know nothing of others. Twelve months of very good trade is always followed by a fever of mill building, and we find ourselves in despair until the growth of our own population and the increased demand incident thereto catches up to production. This sandwiching of one fat year among a lot of lean ones can be permanently prevented in one way and no other—by establishing a steady demand in foreign lands for part of our product. You all remember the worry and anxiety we labored under during the Boxer trouble in China, when our piece-goods trade with that country stopped almost entirely. The yarn mills suffered with the cloth mills. That time of depression, however, would not have been so black had we scattered our foreign shipments over a wider area. To-day we are unfortunately dependent upon China for more than half our foreign sales.

OUR INSIGNIFICANCE COMPARED WITH ENGLAND.

Out of our total exports ending December, 1905, of over $30,000,000, cotton yarns amounted to but $233,000. We grew a little in the six months following, as the record for the fiscal year ending last June showed our exports of yarns to be $310,000. There is a ray of hope even in our seemingly hopeless position, for if we can sell $300,000 worth, one may reasonably infer that by vigorous action we might largely multiply this value.

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Let us examine the transactions of our most formidable competitor for the year ending December last. England sold last year in foreign countries 163,894,000 pounds of cotton yarns, valued at $14,779,000. This gives an average price of 27½ cents per pound.

Other European countries also export considerable quantities of yarns, so that without having exact figures available it is quite safe to assume that the world's yarn exports approximate some $100,000,000. This comparison of the relative position of England and this country establishes our utter insignificance in over-sea yarn transactions.

IGNORANCE OF FOREIGN MARKETS.

As cotton spinners we have certain advantages with which we are all familiar. We also have disadvantages, one being the high cost of disposing of our products. But the most vital one is our ignorance of the needs of our potential customers. Worse than that is the astounding fact that most of us don't even know the countries these purchasers of yarns inhabit. Extravagance is a characteristic of new countries, especially such as are, like ours, rich in natural resources. Therefore it is not at all surprising that we have not yet adjusted our selling methods to the exigencies of long-sustained keen competition. But evolution ever keeps some sort of pace with the march of time, and extravagance will gradually merge into economy. However, ignorance of the world trade of our industry has but one excuse, and, for Americans, a lame one at best. We have been so intensely insular, looking for relief from every depression along the well beaten though oft overcrowded path of home consumption, that we have but just begun to lift our eyes to the wider and well-established trade lanes which lead to the markets of other people.

THE ORIENTAL FIELD.

The great markets for yarns, as for cloth, are found in the Orient. China, during 1893, bought from abroad 132,000,000 pounds of cotton yarn, but in 1903 this had grown to 365,000,000 pounds, and there seems to be no reasonable limit to her future capacity. Again, take the Philippines—our own territory—where we have tariff advantages, and the prestige that goes with the flag, over all our trade rivals. During the eight months ending February last this noncontiguous territory of ours imported 2,330,000 pounds of yarn and thread made from cotton, which was valued at over $600,000, and our share of this trade was a miserable $767 worth, to be exact, while England collared the lion's share, amounting to $296,000.

The average distributer of our yarns knows absolutely nothing of the outlets which are open to him in foreign countries. He must be taught. The banking arrangements between this country and Europe are so excellent that the export business can be conducted on a cash basis. Ocean freights are comparatively cheap. Our coarse yarns are of a better quality than those made abroad, because we put better cotton into them. * * *

OBSTACLES TO BE OVERCOME.

We are admittedly young and inexperienced in the export business. We must combat established merchants with the prestige and experience of years behind them, knowing the needs and even the idiosyncracies of their customers. Their fund of trade information has

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been enriched by knowledge gathered and presented to them through expert Government agents, who have searched the world for trade opportunities.

We have done nothing. The trade we so ardently desire will never come to us of its own volition. Results will accrue only from a virile campaign, and after hard and somewhat expensive work. But this is the only way. It is the price ordained from the beginning to be paid for expansion. Growth needs food, and our efforts, whether individual or collective, ought to be backed by governmental aid, so that the broader questions can be answered for all of us, and we be free to follow the trail blazed through the wilderness of our international commercial ignorance. * * * With knowledge of markets, prices, and needs before us, and with a demonstrated ability to compete with the world at a profit, it will only be our own folly if the next few years fail to show us an important factor in the world's trade in cotton yarns.

COTTON IN THE ORIENT.

STEADILY INCREASING DEMAND IN CHINA.

Cottons hold first place among China's imports. The demand for them is constantly increasing. This demand has been found so important that the Spanish consul at Shanghai has written to Spain to say that he will report the cotton movement every three months. The total cotton imports of the Empire in 1894 amounted to 52,100,000 haikwan taels. In 1904 the figures were 124,083,305 taels; 1903, 128,620,004 taels. Plain goods, shirtings, sheetings, T-cloths, drills, and jeans fell off from 19,015,300 pieces in 1902 to 13,835,506 in 1903, and still further to 12,949,964 pieces in 1904. This was due to the price of raw cotton at the beginning of 1903 and maintained during a great part of 1904. With the falling off in the price of raw cotton, manufacturers began to increase production, but not in time to make up, during the remainder of 1904. for the falling off in the early part of the year.

Of the plain goods referred to, Great Britain furnished 7,841,605 pieces in 1903 and 8,109,020 in 1904. The United States furnished 4,782,141 pieces in 1903, 3,703,548 in 1904—affected by home demand and the war in the East, particularly in Manchuria, whither it had sent considerable cotton goods. Japan furnished 730,723 pieces in 1903 and 607,312 in 1904, the drop doubtless due to the war. Dutch goods fell off in 1904, while the importations of Indian cottons increased.

A NEW ERA OPENING.

Now that raw cotton has returned to its normal price, the Chinese market has taken on new life. Statistics obtainable for the first three months of 1905 sustain this fact, as far as they go; at least Shanghai, China's chief commercial center, shows a notable increase in its importations. In 1904 there was a large increase in the imports of fancy cottons—24,162,260 taels against 19,320,246 in 1903. The chintzes, prints, and turkey reds were imported in smaller quantities than heretofore.

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There was a considerable increase in the imitations of the higher grades—Italians, lastings, Spanish stripes, flannels, etc.

Cotton yarns fell off from 2,738,448 piculs in 1903 to 2,280,878 in 1904. These participated in the entire trade, with 52 per cent in 1903 and with 48 per cent in 1904, but the prices in 1904 were the highest ever paid for yarns in China. Japanese yarns realized 10 per cent more than the same grade or class of goods from India. Imports of Indian yarns fell off in 1904, 252,128 piculs; Japanese, 192,677. Taking the average of the last three years—1902, 1903, and 1904—one gets an annual importation of 2,489,099 piculs of cotton yarns. The yarn production of China, exclusive of Hongkong, is put at 750,000 piculs, three-fourths of which are furnished by the mills of Shanghai, thus giving a total of 3,240,000 piculs of yarn annually consumed in China.

It is curious to note in this connection that the annual importations of wool have remained about the same for forty years. The reason assigned for this singular economic phenomenon at the customs-houses is the fact that those able to buy wool prefer to buy silk or furs, and that those who buy cheap cotton can not hope to touch woolens.

GROWTH IN INDIA.

NO RESTRICTIONS NOR PRIVILEGES.

The importations of textiles, especially cotton goods, into British India exceeds that of any other country in the world. The trade in this class of goods is carried on principally with the United Kingdom, which practically supplies this market with cotton fabrics. As to the future possibilities of the United States getting a part of this trade, the American Cotton Manufacturer says:

"There are no special privileges or restrictions placed upon the products of any manufacturing country. Although under the domination of England, the great mass of Indian merchants are bound by no patriotic or other prejudice in favor of goods of British origin. One day we shall attack this market in real earnest, and although the Britons' hold will be hard to break, it can be done by us if the right methods, skillfully and boldly applied, are adopted by our exporting interests."

The following table shows the imports of piece goods into Bombay, India, from the United Kingdom during the six months ended June 30, 1896 and 1905:

	1896.	1905.
	Pieces.	*Pieces.*
Shirtings, longcloths, and printers:		
Gray	1,796,392	1,518,264
White	371,630	613,462
Jacconets:		
Gray	679,760	513,035
White	400,998	158,890
Madapollams, gray	118,150	66,502
Cambrics, white	7,650	11,328
T-cloths, gray	106,088	61,002
Mulls:		
Gray	127,659	207,854
White	1,576,189	1,239,409
Fancy shirtings, white	130,164	177,633
Lappets, white	62,815	82,061
Dhooties:		
Gray	1,742,758	1,412,757
White	293,970	461,644
Total	7,414,223	6,533,841

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WEST AFRICA.

RESULT UNSATISFACTORY AND UNPROMISING.

The problem of successfully cultivating cotton in the British colonies continues to occupy a large share of public attention in England. For several years past earnest efforts have been put forth in this direction, but thus far without promising results. The Royal British Cotton Growing Association, in recent reports, places faith in the possibilities of successful cultivation in the West African colonies; but the London Times, in discussing the question, says that the results have been very poor and very discouraging. The Times takes the matter up in a lengthy article, in which climatic and all other conditions in the various colonies are fully treated. The Times says:

In the districts bordering upon Northern Nigeria, where the country is more suitable to its growth, cotton may be produced as a staple article, a production of 20,000 bales per annum will not be chronicled for many years, if ever. Southern Nigeria is the only colony possessing a river service giving good and ready transport facilities; but, being rich in forest products, timber, rubber, and oil palms, it can not be looked upon as being an agricultural country.

The Gold Coast Colony offers even less encouragement than do the others. This is largely due to the absence of transportation facilities and to a demand, at fairly good prices, for labor at the mines. Cotton will undoubtedly grow well in different parts of the Gold Coast country, but for a long time little or none may be expected therefrom.

SIERRE LEONE AND NORTHERN NIGERIA.

At Sierra Leone the results have been far from satisfactory. The trouble here is the lack of laborers. The population is limited—800,000 for the two colonies.

There are no great forests in the cotton districts, and the low bush is easily cleared. The cotton association's plantation in Sierra Leone was a failure last year, and the American seed has not proved a success so far. It is estimated that under the most favorable conditions Sierra Leone could not produce more than 140,000 bales of cotton, and the production during any one of the next ten years of 6,000 bales will be the utmost that can be expected. This last figure will not be reached under present conditions, and a great deal of money will need to be spent upon roads and transport arrangements before it is realized.

If West African cotton is to have any appreciable effect upon the world's cotton market, Northern Nigeria is the only colony capable of effecting the desired end. It has a large population, variously estimated at about 20,000,000, and its people are undoubtedly more intelligent than the majority of West African natives. The great drawback to the development of the industry is lack of transport. This can only be remedied by the help of the Niger River, railways, and good roads. Horses and cattle live well in nearly every district, and roads should be easy to make in the thickly populated provinces. A good steamboat service upon the rivers is necessary if cotton is to be a suc-

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cess, and a great deal of money will have to be spent before large quantities of cotton are produced. Most of the country is without the palm oil tree belt, and, given cheap transport and suitable seed, Northern Nigeria could produce all the cotton required to prevent a repetition of last year's cotton crisis, but it will be very slow work for many years and millions of pounds will have to be spent upon the country. Railways—not one, but several—will have to be constructed before the country is opened up, and until such railways are built and river transport made easy West Africa will remain of no importance to the cotton-producing world.

OUTPUT INSIGNIFICANT FOR MANY YEARS.

The colonies of Lagos, Southern Nigeria, Gold Coast, Sierra Leone, and Gambia under the most favorable circumstances—i. e., good roads, transport facilities, central buying and ginning stations, and financial assistance will not be capable of producing more than 350,000 bales, and these figures will not be attained for many years, if ever. A production of 100,000 bales need not be expected for at least eight years. This against the American crop of more than 12,000,000 is a mere drop in the ocean, and can not be expected to help spinners or influence prices in any way. In most of the colonies 1 penny per pound for seed cotton will have to be paid to induce the natives to plant. This is equal, owing to the present heavy West African steamer freights and inland transport charges, to a landed price in England of from 5 to 5½ pence per pound lint cotton, and if even moderate quantities are to be shipped, both the natives and steamship owners will have to accept lower rates in order to compete with the American article. Much of the cotton exported this year from West Africa has been sold in England at a loss of 1 penny per pound, and such a state of affairs can not continue very long. The lack of population, the competition of the natural forest products, palm oil, kernels, rubber, and mahogany, and the mining industry all tend to make the cultivation of cotton difficult and of minor importance to the vast majority of the natives.

Last year it was stated in public that the output from West Africa in five years' time would be 500,000 bales of 400 pounds each, but it is impossible to secure information supporting such an estimate, and if by the end of 1909 the year's figures are to read 50,000 bales, a tenth part of such estimate, the economic conditions of Lagos, Sierra Leone, Gold Coast, Gambia, and Southern Nigeria will have to change very rapidly. The production this year will be about 6,000 bales.

SOUTHERN NIGERIA UNSATISFACTORY.

Whereas under favorable conditions Lagos might produce 200,000 bales, because of bad roads, lack of transportation facilities, etc., it will yield no more than 40,000 bales per annum.

The colony of Southern Nigeria, adjoining Lagos, and now for administrative purposes attached to the latter, has so far given very unsatisfactory returns for the money spent by the cotton growing association. A plantation upon the Sobo plains was mapped out last year, and several hundred acres cleared and planted with American seed. About £5,000 is said to have been spent upon the concern dur-

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ing the year, and the resulting production of cotton, valued at less than £100, is very discouraging. The failure was undoubtedly due principally to climatic difficulties, poverty of soil, and the inexperience of those responsible for the selection and working of the venture.

Nigeria is in the palm-oil belt, is, in fact, the home of the palm-oil tree, and cotton will not grow as well in the wooded parts as it will elsewhere. By and by, when the inhabitants of Nigeria have better means of marketing their products, better care will be given to the palm-oil tree and its products. At present the natives of Lagos send a ton of palm-oil kernels, worth about $60 a ton in England, with every 60 gallons of oil exported, while Nigerians send but 1 ton to every 207 gallons.

THE WEST INDIES.

SEA ISLAND COTTON IN BARBADOS.

Consul Clare, of Barbados, writes that the efforts to grow sea-island cotton in the West Indies are not as promising as the cotton world had been led to believe by those who thought that a cotton that was indigenous to the West Indies would surely thrive in those parts. The consul quotes Mr. Henry A. Ballou, B. Sc., entomologist on the staff of the imperial department of agriculture, as follows:

The practice of ratooning in the cultivation of sea-island cotton in the West Indies would appear not to be desirable on general principles, and the experience of the past few years tends to confirm this opinion. Although originally indigenous to these islands, sea-island cotton in its present condition is an exotic. The native type is to be seen, hardy, perennial, coarse of leaf, thick of bark, resistant to disease, unattractive to insect pests or resistant to their effects, and thoroughly acclimatized. The cultivated sea-island cotton plant is a highly specialized organism, developed with great care, and comes back to these islands as a tender annual, with thin bark, thin, delicate leaves, susceptible to disease, attractive to insects, and apparently unable successfully to combat the long drought and hot sun of the Tropics.

INSECTS TO BE FEARED.

The principal insect pests that are of importance in the matter of ratooning are the scale insects, the red maggot, the leaf-blister mite, and certain leaf-mining insects. During the growing (or wet) season the cotton plant makes its maximum growth and comes to its period of fruiting. During the dry season very little growth is made, and it is at this time that the scale insects increase greatly in number. If there are no considerable sources of infection near the cotton fields, the scale insects will rarely become so numerous in any field during the time from the planting of the seed to the end of a first or even a second picking as seriously to affect the crop. If at the beginning of the growing season very young shoots spring from a stump infested with scale insects, the case becomes serious. In addition, every plant in this condition is a menace to any young cotton that may be growing near.

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Careful examination of a number of fields of old cotton at Barbados at the end of the last dry season showed that very few plants were free from scale insects, while many were so seriously infested as to be dead or dying. The first outbreak of the leaf-blister mite occurred on ratoon cotton in Montserrat, and the infestation spread to young plant cotton growing near. The first serious attack of the red maggot occurred on old ratoon cotton and spread to young plant cotton near by. During the past two years a few cotton leaves have shown the tunnels of a leaf miner which works under the upper epidermis of the leaf. The tunnel of this insect appears as a fine tracery, except where there are many; then the epidermis peels off and the leaf has a characteristic coarse and wrinkled appearance. The ratoon cotton in Barbados at present shows this appearance of the leaves and indicates that this insect is more numerous than formerly. Clean cultivation is one of the fundamentals in dealing with insect pests, and clean cultivation in cotton growing at the present means the complete removal of cotton plants at the end of the year and a fresh start from seed for the next growing season.

SATISFACTION EXPRESSED.

The London Times, in a recent issue, copies of which were forwarded by Consul Halstead, of Birmingham, publishes a letter from Sir Daniel Morris, written from Barbados July 27, addressed to Sir Alfred Jones, of Liverpool, in regard to the cultivation of cotton in the Barbados. Sir Alfred Jones is a prosperous shipowner and head of the British Cotton Growing Association. Sir Daniel writes as follows:

You will be very gratified to learn of the progress we are making in the cotton industry. I inclose a list showing the exports during the last six months. The planting for the next crop is actively going on. There is no doubt the area will be greatly increased in all localities where the industry promises to be a success. We may expect a large crop in 1906.

It is very enterprising of you to organize the special express excursion trains to London from Liverpool and Manchester to the Exhibition of British Cotton and Cotton Growing at the Imperial Institute. These special excursions will be sure to do a lot of good. It would be also useful if, later on, a similar exhibition could be opened at Liverpool and Manchester; or perhaps the Imperial Institute could arrange to send the exhibits to these cities for a time.

If you know of any people who wish to go in for cotton at Barbados, St. Vincent, Montserrat, Antigua, or St. Kitts, I would be happy to give full information. We have proved that first-class cotton can be grown in these islands at a lower price than in the United States, and the profits are available within six or eight months from the time of planting.

The exports referred to in the letter amounted, for the six months ending June 30 last, to 3,056 bales, representing 868,596 pounds, valued at £35,622, or about $178,000.

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ENGLAND'S TRADE.

INCREASED EXPORT OF PIECE GOODS.

The following paragraphs, relating to Great Britain's cotton trade, are taken from the Newcastle Chronicle, forwarded by Consul Metcalf:

The activity in the cotton manufacture is continued, and the exports in the first half of this year show enormous increases. Where, in the first six months of 1904, there were 76,000,000 pounds of cotton yarn exported from the United Kingdom, in the present year there were 97,000,000 pounds, the increase being spread over most of the chief buyers of yarn. Of cotton piece goods, in six months of 1904 the exports were 2,593,000,000 yards; in the first six months of this year they had risen to 3,005,000,000 yards. There are a few countries, such as Venezuela and the Argentine, which have bought less cotton manufactures from us this year than last, but nearly all our chief customers have contributed to that vast increase this year, which is shown by the figures of the total exports given above. China and Hongkong, Bengal and Bombay, Japan, Egypt, and other countries have greatly increased the demand for cotton piece goods from us, and the exports have been and are on a scale that is enormous. In some measure this may be due to the fact that cotton was last year high in price, and that this year it has fallen to more moderate values; but whatever the cause or causes, the huge exports of cotton manufactures have aided our eastern trade and have given an enormous activity to the manufacturing districts of Lancashire. Up to the present that activity has continued, but the great fluctuations in the market price of cotton in the last few weeks are rather threatening. It is certain that up to the present time the imports of raw cotton have been ample, and it may be expected that they will continue so for a month or two longer; but the extent of the new cotton crop in the United States seems to be in doubt, and on that crop will depend in measure the prices of cotton and the values that may be quoted for its manufactures. Meantime, Lancashire is prospering, and is diffusing in other industries and districts the gains from the cotton trade.

RESTRICTION OF PURCHASE SCHEME.

Mr. C. W. Macara, chairman of the committee of the International Federation of Master Cotton Spinners and Manufacturers' Associations, received on August 30 from Mr. Arno Schmidt, organizing secretary, the report of his recent visit to continental associations included in the federation. Mr. Schmidt reports that the recommendation to the users of cotton throughout the world to restrict their purchases of cotton to actual requirements, which was contained in the manifesto issued on July 31 by the committee after their meeting in London that day, had been widely followed on the Continent. The small sales in Liverpool and in American markets prove conclusively that this recommendation has also been generally adopted by all cotton-using countries. In the meantime the scheme for obtaining trustworthy statistics as to the consumption of cotton and the stocks held by spinners is making satisfactory progress. Spinners, the committee believe, have only to cooperate in their own interests to render the trade independent of the information as at present supplied by persons who are acting principally for the sellers of raw material.

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TARIFFS.

SOUTH AFRICA.

PROPOSED CHANGES IN RATES.

LOCAL MANUFACTURERS ASK FOR INCREASE.

The Johannesburg correspondent of Dun's Review writes that there is considerable unrest in commercial circles in South Africa over proposed changes in tariff rates, to consider which a customs convention was formed. It is claimed that the existing tariff contains many provisions that operate against local manufacturers, and in consequence an agitation for revision was started. Furthermore, colonial questions have arisen and on important points the inland and maritime colonies are at variance. Regarding the attitude of the Cape government toward manufacturers the correspondent says the Cape Colony has been the first to officially note the effect of the customs union tariff upon local industries. The Cape assembly appointed a committee to consider the tariff question. After taking testimony the committee reported that several local industries were seriously injured and others destroyed by the customs convention, and declared that "it is absolutely necessary to strongly recommend a revision of the customs union tariff."

INDUSTRIES OF THE CAPE.

Important recommendations have been made in connection with most of the Cape's industries. The committee's suggestions are thus summarized: To assist colonial candle manufacture, an addition of 1d. per pound to the present duty of 7½ per cent ad valorem on candles; on colonial-made furniture, an increase of 7½ per cent ad valorem, and on imported furniture to 25 per cent, raw material to come in at as low a duty as possible; confectionery and jam trade, an additional duty (protection now representing 2d. per pound); biscuit and cake manufacture, a protective duty of 1d. per pound upon sweetened and ½d. per pound upon unsweetened biscuits in addition to present ad valorem duty, namely, 7½ per cent for English-made goods and 10 per cent for foreign; milling industry, additional protection of 1s. per 100 pounds on wheat and 2s. per 100 pounds on flour; printing industry, free importation of raw material and a duty of 33⅓ per cent on imported printing, stationery, etc., except literary matter; leather industries, the raising of duty on all leather and leather goods from 7½ to 25 per cent, with special tariff on boots and shoes; cart and wagon building, some measure of protection.

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UNSATISFACTORY CONDITIONS.

To those who have the interests of local manufactures at heart the report does not make satisfactory reading. Industries have, according to the committee's findings, declined greatly, and some that formerly were flourishing are practically becoming extinct. Others are just starting, and with adequate support would afford employment to thousands of people. It is claimed that many articles now imported might be produced in the country. Especially is this said to be the case in regard to cart and wagon building. The free importation of cheap foreign-made vehicles, it is claimed, has been one of the greatest factors tending to the injury of the trade. Relief is strongly urged for this industry, which is carried on in many parts of the colony.

Last year, among the Cape's imports were the following: Planed and manufactured wood other than furniture, £401,331; furniture, £530,000; pottery and majolica, £119,455; pipes for drains, etc., £210,332; manufactured tobacco, cigars, etc., £184,397. All these goods, or most of them, in addition to numerous others, should, in the view of the South African Manufacturers' Association at Cape Town, be manufactured in the colony. At present, however, manufacturers find it impossible to compete with the imported articles.

ARGENTINA.

ABOLITION OF SURTAX AND REDUCTION IN TARIFF RATES.

Under existing law Argentina imposes a surtax of 2 per cent ad valorem on all imported merchandise subjected to a duty of 10 per cent or more. The minister of finance has presented a measure providing for the abolition of the surtax, and also for reduction of duties on a number of specified articles. A partial list of the articles specified is given below, together with present and proposed duties, the figures in the ad valorem table representing the rates per cent on the official valuation.

I. AD VALOREM DUTIES.

Articles.	Present duty.	Proposed duty.
Ready-made clothing of silk, wool, cotton, mixed, etc	50	40
Ready-made shirts, ties, corsets, underlinen, etc	50	40
Trunks, portmanteaus, bags	50	40
Boots	50	40
Mosaic	50	40
Furniture	50	40
Hats and caps of silk, wool, cotton, or straw, and ladies' hats	50	40
Stockings of cotton, wool, silk	45	40
Blankets of wool, or of wool and cotton mixed	40	35
Underclothing of wool or cotton	40	35
Screws, bolts, nuts	40	35
Tissues of wool, or of wool and cotton mixed	35	30
Anhydrous ammonia	10	5
Machines (certain kinds)	10	5
Lead, in pigs or sheets	10	5
Tin, in ingots or sheets	10	5
Watches of metal, including silver	25	5

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II. SPECIFIC DUTIES.

In the annexed table a list of articles is given subject to specific rates of duty, and the figures represent gold dollars:

Articles.		Present duty.	Proposed duty.
Vegetable oils, not otherwise mentioned	kilogram	$0.10	$0.08
Linseed oil	do	.10	.08
Cocoanut and palm oil	do	.04	.03
Starch	do	.08	.06
Rice	do	.02	.02 / .01½
Vermicelli, macaroni, etc	do	.07	.04
Sardines		.07	.05
Yerba tea:			
Prepared	kilogram	.04	.02½
Unprepared	do	.01½	.02½
Beer:			
In casks	liter	.09	.08
In bottles	bottle	.12	.10
Wooden matches	kilogram	.40	.25
Kerosene	liter	.03	.02
Paper:			
Common white, for newspapers	kilogram	.02½	.02
Colored, for packing	do	.10	.09
Writing	do	.05	.04
French nails	do	.02½	.02
Collars of cotton or of linen	dozen	1.25	1.00
Cuffs of cotton or of linen	dozen pairs	2.00	1.50
Hats of woolen felt	each	.35	.30

If sanctioned by Congress, the proposed rates will presumably take effect from January 1, 1906.

BRITISH-GREEK CONVENTION.

RECIPROCAL TARIFF AGREEMENT FAVORING BRITISH COLONIES.

The commercial agreement between Greece and Great Britain of November 23, 1904, makes important concessions to British products. A copy of this agreement is furnished by Mr. Charles S. Wilson, American minister at Athens. One of the provisions in the declaration reads:

The government of Newfoundland agrees to recommend to the parliament of Newfoundland the admission duty free of currants and sultanas, the produce of the Hellenic Kingdom, imported into Newfoundland, in return for the reduction by the Greek Government of the duty on Newfoundland codfish imported into Greece to 5 francs per hundred okes.

It is further stipulated that goods produced or manufactured in any part of the British Empire shall enjoy "complete and unconditional most-favored-nation treatment" so long as the same treatment shall be accorded to goods of Greek origin and manufacture. The following shows the modification in the Greek tariff in favor of British goods under the convention of November, 1904. The rates are given in

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Greek currency; 100 okes are equivalent to 283 pounds; the drachma is equal to a French franc, which is equivalent to 19 cents.

Class.	Description.	Duty, in metallic drachmas, reduced—	
		From	To
11	Herrings, per 100 okes	20.00	7.68
13	Cod and stockfish, per 100 okes	11.36¼	5.00
139	Confectionery of all kinds, per 100 okes	300.00	38.40
	NOTE.—From the above class of the tariff are excepted halva and rahatlakoum, as well as similar articles especially mentioned in the tariff in force at the date of the signature of the Greco-English declaration of 1904, and chocolate, chocolate and other creams, candied fruits, and all kinds of fondants.		
142	Biscuits (galettes) "gimblettes," etc., with sugar or butter or both, and crackers, with or without sugar or butter, and all similar goods, including "pate a kataif," per 100 okes	80.00	40.00
143	NOTE.—(Addition.) Fruits preserved in vessels hermetically sealed, fruit preserved in wine or spirits or solution of sugar, as well as marmalades and jams, jellies, and other articles not especially mentioned.		
156	Cotton threads for sewing, wound on cards or bobbins or in skeins, white, unbleached or dyed, twisted or corded or not, without tare allowance as regards cards, per 100 okes	150.00	100.00
159	Dyed cotton tissues for linings, per 100 okes	120.00	100.00
168	Carpets of hemp or jute, per 100 okes	80.00	40.00
185	Tissues of wool or other animal hair ("poil") not specially mentioned, of any color or make, having the warp or woof entirely or in great part of cotton, and weighing more than 450 grams per square meter, and satin of wool and cotton, per 100 okes	130.00	100.00
208	Coarse hempen tissues, per 100 okes	30.00	15.00
	NOTE.—Coarse tissues of jute for making sacks are included in the above class of the tariff.		

A supplemental declaration dated May 17, 1905, provides for reduction per oke from 2 drachmas to 1 drachma.

CANADIAN DUTY ON WHITE LEAD.

The following announcement has been made by the Canadian authorities regarding duty on white lead:

A change in the tariff on white lead is announced as follows: "Provided that dry white lead purchased on or before the 6th day of July, in this year, at any place out of Canada for importation into Canada, on evidence to the satisfaction of the minister of customs of the purchase and sale having been so made on or before the said day, may be entered for duty at the rate of duty in force immediately before that day, notwithstanding an increase of customs duties under this act, but this proviso shall cease to have force and effect after the 15th day of September of this year." July 6 was the date of delivery of the budget speech.

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SCIENTIFIC.

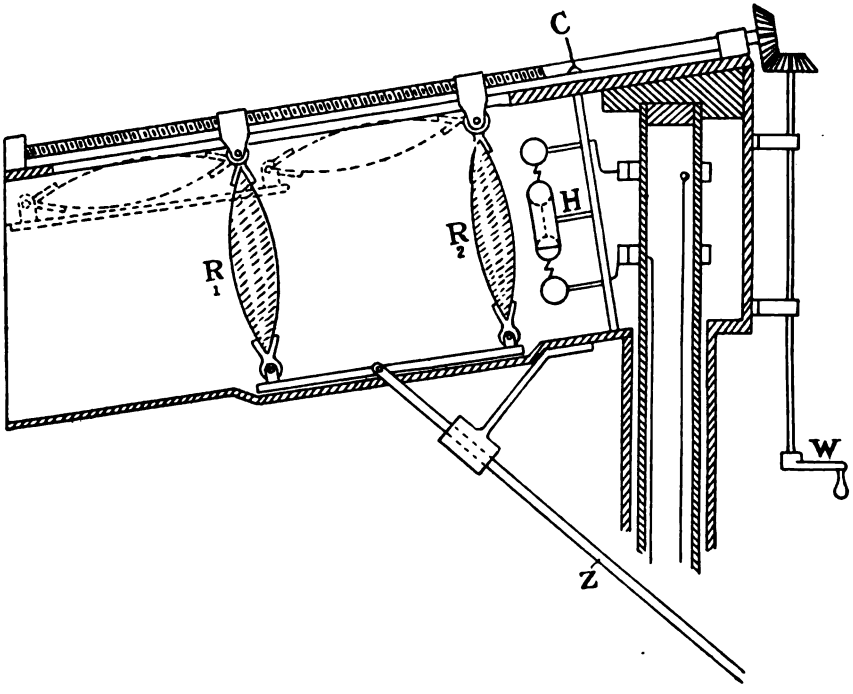
THE TELEMOBILOSKOP.

PROMISED AID TO NAVIGATION.

INVENTION THAT WILL BE USEFUL TO NAVIGATORS.

Consul Bardel, of Bamberg, Germany, reports the invention of the telemobiloskop by a resident of Düsseldorf, an apparatus which merits the attention of all seafarers, and which is said to have gained the special attention of German maritime circles. Describing the telemobiloskop, Consul Bardel writes:

The telemobiloskop is to enable the pilot of a ship, in foggy weather, to discover the nearness of another vessel, even if the pilot of the other



vessel neglects to give signals by which he could make himself heard. The apparatus works automatically, so that after it is once adjusted nothing whatever has to be done until a ship is discovered by it, when, by an unimportant manual action, the nearness of the other ship can be disclosed. The invention is based on the principle that electric

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waves, such as are used by wireless telegraphy, are reflected the moment they strike metallic objects in their course, while otherwise they continue on their journey.

The accompanying sketch shows a part of the apparatus. The carrier of the same is the axle C, which has to be hung so that with all the motions of the ship it has to remain in the same vertical position. Around this axle, moved by a machine, turns the large projecting box, which slants off somewhat toward the water, and, standing on some high elevation, perhaps the mast, continually searches the ocean for another vessel. H represents the inductorium of the sparks. Here, as the little darts indicate on the sketch, sparks generate continuously, which sparks form the electric waves which are sent out of the projecting box to the surface of the ocean. The inventor claims that every large ship can produce electricity, and with the modern steamers and men-of-war it is only a question of tapping a small quantity of it from existing plants to properly feed H.

In order to make the electric waves travel compactly in a body, two lenses, R, are adjusted inside the box; they are to shape the electrical waves into a cylindrical bundle. This mass of waves, now in constant rotation, with a slanting tendency toward the horizon, searches the surroundings. If the waves strike a ship (all ships have metal parts of some kind), a reflex will bring them back to where they started. To catch this a receiver, similar to those used for wireless telegraphy, is adjusted over the projecting box. A metal plate between the receiver and the box so separates the electrical waves that only those returning can strike the receiver. The receiver at once indicates to the captain that a ship is near, and locates her. To discover the exact distance to the other vessel, the lenses R are so turned, by means of the handles W or Z, as to get the strongest reflection from its metal parts, which the loudness of the indicator will mark out.

EXTRACTION OF OIL.

A NEW AND SUCCESSFUL PROCESS DEVELOPED.

Consul-General Skinner, of Marseille, France, in transmitting the following report covering the extraction of oil by means of dissolvents, a new and successful process adopted by manufacturers of that city, says that it can not fail to arouse the interest of American firms now treating oil cake by the dangerous naphtha or sulphuret of carbon process. He says:

Two well-known concerns in Marseille have abandoned the naphtha or sulphuret of carbon process in favor of tetrachloride of carbon, with results satisfactory to themselves. I am indebted to one of these firms for the following statement, based upon actual daily experience:

"*Advantages.*—The advantages recognized by the use of tetrachloride of carbon as compared with sulphuret of carbon are: (1) The oils obtained are clearer, are free from hyposulphites, and lack the disagreeable odor of oils treated with sulphuret of carbon; and (2) tetrachloride of carbon is not only noninflammable, but is an extinguisher, eliminating all danger of explosions and fires, so frequent with sulphuret of carbon.

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"*Disadvantages.*—Tetrachloride of carbon is more expensive than the sulphuret, and its use is relatively expensive, the material employed being more quickly attacked by tetrachloride than by sulphuret."

Replying to my request for technical information in regard to this process, M. Emile Deiss, the well-known chemist of 3 Rue Suffren, Marseille, and who is largely responsible for the adoption of the new process commercially, says:

"Tetrachloride of carbon (CCl^4), cloride of methylene perchlorated, formerly dichloride of carbon, is produced by the action of chlorine upon chloroform in the sun. It was discovered by Regnault in 1839.

$$CH+Cl^3+Cl^2=HCl+CCl^4.$$

"It may be produced also by the reaction of chlorine upon ethylene. (Dumas.)

"Muller & Dubois, at Reinan, near Manheim, Germany, have obtained a patent for the production of tetrachloride of carbon by the action of chloride of sulphur upon sulphuret of carbon in the presence of metals or of metallic chlorides.

"Lever Brothers, of Birkenhead, England, obtained a patent on November 25, 1889, for the extraction of oils by substituting tetrachloride of carbon for sulphuret of carbon, from fatty materials generally—nuts, seeds, oil cakes, etc.—using it in the same manner as sulphuret of carbon and in the same apparatus.

"*Advantages.*—Agreeable odor, nontoxical diluted in the air, absolutely noninflammable, extinguishes combustion, boils at a temperature sufficiently low to not alter the material being treated, but high enough to avoid appreciable losses, does not decompose nor unite with oils which, in consequence, have no bad odor. Dissolving power considerable; gives an oil that is clearer than sulphuret of carbon.

"Therefore it is a perfect dissolvent, offering no danger of intoxication, explosion, or combustion in its manipulation.

"Tetrachloride of carbon is a colorless liquid, which does not unite with water, possesses an agreeable etherized odor; soluble in alcohol and ether; boils at 87° C. Density, 1.629 to 0° C.

"After having enumerated the advantages of tetrachloride of carbon as a dissolvent of fatty matter, it will be understood easily that in a short time it will occupy the place of sulphuret of carbon, which is dangerous to handle, and gives oils containing sulphur necessarily inferior to oils which are exempt.

"To-day tetrachloride of carbon costs about 70 francs ($13.51) per 100 kilograms (220 pounds), and will become cheaper as the industry perfects itself. Taking into consideration the trifling loss in the actual use of this dissolvent, the cost of treating oil cake may now be estimated at 1.50 francs per 100 kilograms (29 cents per 220 pounds), which is very low.

"Furthermore, oil cake from which the grease has been eliminated by the sulphuret of carbon process may be used only as a fertilizer, while oil cake from which the grease has been extracted by means of tetrachloride of carbon may be fed to live stock, therefore commanding a higher price."

If the information here supplied arouses the interest of American manufacturers of cotton, corn, or other oils, I am at their disposition to secure for them any further facts which they may require.

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NOVEL FIRE ESCAPE.

TO RESCUE AUDIENCES FROM BURNING THEATERS.

A recent issue of Fire Call, a periodical published in London, England, contains the following description of a novel invention intended to prevent loss of life by fire in theaters:

A novel method of rescuing the audience of a theater in case of fire has been invented by Mr. Mausshardt, of Germany, who has recently made an experiment which is stated to have been successful. Put briefly, the principle of his invention is the removal of the pit, en bloc, with the boxes attached to it, as well as the partition walls, into the street, by means of rollers underneath the floor running over a track of rails continued to a suitable length outside the theater, the scheme also allowing for the simultaneous rescue of the people in the balconies above by exits through specially constructed "window doors," opened automatically all at once, or by hand, which lead on to suspended galleries lowered to the street by the same mechanism actuating the move able pit. The inventor, by these means, aims at emptying the theater from pit to gallery within thirty seconds, whether the audience number twenty or two thousand. The galleries of each balcony are described as being suspended on hinges from heavy outriggers, which act as powerful single-arm levers, and turn round pivots fixed below the first balcony. On being lowered, all the outriggers and the suspended galleries (three are named) move to the side, and descend to the level of the street. The outriggers are fixed at their upper ends to wire ropes which run over a pulley on the roof through the lateral walls to the ground floor, where they are wound on rollers fixed rigidly to the side walls. As the outriggers descend a transversal shaft is actuated through a conical-toothed gearing, and the racks fitted beneath the pit as well as the pit itself, which runs on rails, are set in motion. The gearing is so actuated that at the moment the outrigger galleries touch the street the whole pit has been removed from the theater building. The apparatus is designed to be operated from an inclosed cabin, either by means of a motor or by hand through a crank, on a fire signal being sent. Provision for the rescue of people who do not escape by this operation is provided by stationary running galleries fitted outside the building, which lead on to a flight of stairs, ingeniously arranged for special exits to each balcony. The rescue of performers on the stage, it is added, is also a feature of Mr. Mausshardt's scheme. A model theater has been constructed by the inventor on the plans of the Karlsruhe Court Theater; but a real playhouse on these lines yet remains to be constructed.

AN AUTOMATIC ALARM.

Consul Mahin, of Nottingham, reports that a successful fire alarm has been invented in England. Experiments warrant the belief that it will prove of great value in preventing the spread of fires. He writes:

A new automatic fire alarm was tested in this city this week. In a large room of a hotel, where three of the alarms, small instruments,

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were attached to the ceiling, a quantity of waste on a tray was saturated with methylated spirit and set on fire. In twelve seconds a gong attached by electric wires to the instruments on the ceiling sounded an alarm. Only the raising of the temperature to a certain degree (which may be varied according to circumstances) is required to cause the alarm. The instrument is merely a scientific application of the fact that heat causes expansion. As soon as the metal in the little apparatus becomes affected by the rise in temperature which must inevitably take place immediately a fire breaks out, it expands, completes an electric circuit, and the bell, which may be placed anywhere—at the fire station if desired—rings. An ingenious arrangement regulates the degree of heat at which the instrument shall give warning. In a room where, by reason of the work carried on, the temperature is ordinarily high, the point at which the warning shall be given must obviously be proportionately higher. A turn of a little clock hand is all that is required to effect it. It is claimed that the instrument may be made so sensitive that merely breathing upon it will cause the alarm to be given.

The test at the hotel is reported to have been entirely successful. It is also stated that several fires have started in rooms where the alarm has already been installed, and in every case were so quickly extinguished that the damage was trifling.

The patentees are the Pearson Fire Alarm Company (Limited), 62 King William street, London.

INVENTOR OF THE TELEPHONE.

CLAIM THAT CHARLES BOURSEUL WAS ORIGINAL INVENTOR.

A recent number of the Frankfurter (Germany) News, a copy of which is furnished by Consul-General Guenther, contains an article intended to establish that neither Reis nor Bell are the inventors of the telephone. The Scientific American, in July last, published an article written by W. H. Sharps in reference to the development of the telephone, in which Mr. Sharps expresses the opinion that Reis, of Friedricksdorf, had invented the telephone in 1861. Commenting on this statement the Frankfurter News says:

Mr. Sharps is in error in his presumptions as well as in his ideas about the facts, as neither Reis nor Bell are the inventors of the telephone, which already in 1854 was described in all its parts and was probably also constructed by the French mathematician Charles Bourseul. The Didaskalia, of Frankfort, for Thursday, September 18, 1854, reports about the man and his invention, under the caption "Electric telephony," the following:

"The wonders with which electricity has of late surprised us are, as it appears, to be increased by a new one which will not only produce a great revolution in the present electric telegraphy, but which would also increase its utility in an incalculable manner. It is nothing more nor less than an electric transmission and delivery of the spoken word. The idea is from a young and well-informed modest man, Charles Bourseul, who in 1848 was a soldier in the African army, where he attracted the attention of the governor-general through a

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mathematical course of instruction which he gave to his comrades in the garrison of Algiers, and who lives in Paris now.

"The problem of Bourseul, of the practicability of which he is convinced, may perhaps be one of those discoveries which afterwards is declared a very simple one by the scientific world, and which they then want to make us believe would have been found long ago if they had deemed it worth while. * * * Electric telegraphy, at one time pronounced to be the utmost nonsense, travels now through the whole world as something to which we have almost become accustomed; if we consult the principles of physics with reference to these new ideas of a young physicist then they make no objections to the possibility of their accomplishment, but their success seems to be even more probable than that of electric telegraphy itself not long ago. If this is accomplished, then electric telegraphy would have become common property; no further machinery and knowledge except a galvanic column, two vibrating plates, and a metallic wire would be needed; without other preparation one would only have to talk against one of the metallic plates, and another would have to hold his ear against the other plate; in this way they could converse with each other as if in private. The young inventor believes in the practicability of his invention and challenges scientists to prove that the laws of physics are contradicted by the above principles and would therefore make the desired end impossible. Meanwhile the matter certainly deserves the attention it receives in the highest degree."

ALCOHOL FROM SAWDUST.

Consul Halstead, of Birmingham, England, reports a German invention for producing alcohol from sawdust. He says:

A promising process for the manufacture of alcohol from sawdust has been devised by Prof. Alexander Classen, of the Aix-la-Chapelle Technical High School. In place of liquid sulphuric acid Professor Classen uses gaseous sulphurous acid, which is readily driven off by the application of moderate heat, leaving the treated wood practically free from any substances liable to prevent fermentation of the sugar contained therein. The experimental plant comprises the acid apparatus, in which the solution of sulphurous-acid gas in water is prepared, and the gas escaping from the boiler or digester reabsorbed in the water; the revolving boiler or digester, similar in construction to those used in making chemical pulp, and an exhaustive battery, consisting of a series of tanks through which water is passed and where the sugar produced in the digester is washed out. The sugar produced by the mixture of sulphurous-acid gas and water with sawdust, of which about 85 per cent is fermentable, remains in the sawdust, which is then introduced into the exhaust tank, where the sugar is washed out. To produce thorough contact of the sawdust with the sulphurous-acid gas, the digester contains a revolving iron drum, lined with lead, round which is a steam jacket for heating. The drum is nearly filled with sawdust, to which is added acid solution equal to about one-third of it in weight. The steam in the jacket raises the contents of the digester to a temperature of about 295° F., and the gas, on being driven out of the water into the wood, is made to act directly on the cellulose, converting it into sugar.

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DETAILS OF THE PROCESS.

This process lasts three hours, during which the pressure within the digester, due to the expansion of the gas, rises to 100 pounds or more per square inch. The sulphurous acid gas and steam are then blown off into absorbing tanks in the acid room, where 75 to 80 per cent of the gas is saved for further use. The cover is next removed and the digester is emptied of its contents, which now resemble ground coffee. The exhaustion vats, into which the contents of the digester are emptied, are so interconnected by pipes and valves and also with the pump that the contents of any one tub can be emptied into another. When the contents have been treated with ten washings, the vat is emptied and refilled with fresh sawdust. Before emptying, fresh water is supplied, and after refilling, the strong sugar solution is admitted; 450 to 500 pounds of sugar are thus obtained from a long ton of dry sawdust. The solution from the exhaust battery is pumped into a receiving tank, there to be neutralized with carbonate of lime. From this neutralizing tank the solution is pumped into a fermenting vat, where yeast is added. Fermentation commences in a very short time, and on completion the product passes to the still condensers installed in the still room. This part of the process is in nowise different from that usually employed in distilleries. The result is that about 50 gallons of crude alcohol, or 25 gallons of absolute alcohol, are obtained from a long ton of sawdust.

ELECTRICAL EXPERIMENTS.

MARVELOUS RESULTS OF AN INVENTOR'S CONTROL OF ELECTRICITY.

Consul-General Guenther, of Frankfort, reports that wireless telegraphy may be used on moving trains; that success has been secured in producing portable wireless telegraph stations, and in running clocks by wireless telegraphy. The reports show remarkable progress and are of vital interest to everybody having anything to do with railroads, telegraphy, or electrical appliances. He writes:

Practical experiments have demonstrated that wireless telegraphy on moving trains will render valuable service in preventing accidents. It is stated by competent authority that the late railway horror at Spremberg, near Berlin, would have been prevented if the train had been supplied with an apparatus for receiving wireless messages. Two years ago the Prussian railway authorities made experiments with wireless telegraphy on moving trains upon the Zossen-Berlin military railroad. Each station was supplied with a sending and receiving apparatus, as were also the trains. For the transmission of signs the telegraph wires along the railroad were used, in order to save electric energy. These experiments, which were continued up to a few weeks ago, have clearly demonstrated that the apparatus for wireless telegraphy upon a moving train can communicate at all times with any telegraphic station on the line, and report, instantaneously, irregularities, accidents, etc. Private telegrams can also be sent calling for help, notifying anxious relatives of passengers waiting at stations, etc. On the other hand, telegrams from each station can reach the moving train and warn the locomotive engineer against collisions, impediments on the track, and other dangers.

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PORTABLE WIRELESS TELEGRAPH STATIONS.

Portable wireless telegraph stations are now manufactured of such light weight that carts or wagons are no longer needed for their transportation, the parts being carried by the men. While with stations moved by wagons the air conductors are attached to balloons or kites, with portable stations they are attached to steel masts. These masts, three in number, can be pushed together like a telescope, and are then about 12½ feet long, but can easily be pulled out to a length of 33 feet. Owing to their light weight, which for one mast, inclusive of braces and wire rope, is only 44 pounds, they can be put up in short order. They are supplied at the foot with cast-iron ground plates, and twice steadied, in three directions, by means of wire ropes fastened to ground anchors. Between the three masts zinc-coated copper ropes, consisting of eight twisted wires, are stretched as air conductors. The ropes are fastened to the masts by brass hooks, with light glass insulators.

The electric energy required is furnished by a so-called "tread dynamo," mounted upon a sort of stationary bicycle with a light seat for the man, who keeps the machine going with his feet. The weight of this dynamo is 44 pounds. The electric energy can also be supplied by a portable storage battery. For the transportation of the complete wireless telegraph station with a tread dynamo 10 men are required; 11 men where a storage battery is used. The net weight of a complete station with tread dynamo is 440 pounds; if a storage battery is used, 506 pounds.

So far these stations, on account of the limited height of the masts, can only be operated on level lands for 15 to 16 miles, but they can be easily moved, are quickly put up, and work with certainty.

CLOCKS RUN BY WIRELESS TELEGRAPHY.

It is stated in German papers that Dr. Max Reithoffer, professor at the Vienna technical high school, who is considered an authority with reference to the wave theory, has, jointly with the court watchmaker, Kral Morawetz, submitted to the common council of that city a plan for an electric system of clocks run by wireless electricity. They propose to furnish the chronometric and electric apparatuses, including clocks, to the city free of charge, and to make the trials. The city has only to furnish the current, the cable connections, etc., and give the use of suitable buildings. The common council has appropriated $600 for making experiments. If these should lead to the adoption of the project, Vienna would be the first city in the world having a system of electric clocks regulated by wireless connection.

NEW PROCESS OF GALVANIZATION.

Consul-General Guenther, of Frankfort, writes that German papers report that Mr. Cowper Coles, an Englishman, has invented a new process of galvanization, and has recently demonstrated the same with samples of iron, copper, aluminum, and other metals. The objects to be galvanized are simply heated to 260° in a bath of zinc vapor, the duration of which depends upon the desired thickness of the coating, but which is always short. After heating the objects are thoroughly coated with a layer of zinc, which on the surface has formed an alloy with the other metal by penetrating into it to a considerable depth. A copper rod can in this way be almost entirely transformed into brass, while the temperature employed remains far

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below the melting point of both metals. A great advantage of the process lies in the evenness of the coating, which is so perfect that such zinc-galvanized screws and bolts afterwards fit perfectly into the nuts, while with other methods they have to be polished. It is also very convenient that the objects to be galvanized have not first to be cleaned.

The retorts in which the heating takes place are of iron, and are heated from the outside. Another peculiar advantage is that the zinc does not adhere to the walls of the retort, but that these, after months of use, are entirely clean. The explanation for this is that the walls of the retort are heated most, so that no zinc vapor condenses on them. Experiments to use the process with metals other than zinc have been so far made with copper and antimony, and have been partly successful, but not to a degree to make them of practical use.

NEW FACTS ABOUT WHEAT RUST.

Consul-General Guenther, of Frankfort, reports that according to German papers the most important work with reference to the rust of cereals has been done by Erikson within the last few years, but that also in the United States important investigations have been made. Formerly the capability of the summer spores of wheat rust for propagating the disease had been considered as slight. This view must be changed because these spores are not as short lived as had been supposed. Bolley, of the London College in New Dakota, has established the fact that the red "summer spores" of many-colored rust fungi keep even over winter. They even resist the dryness and the sunshine of midsummer as well as the cold of winter in the tissues of the wheat plant. This makes it possible that the spores are carried for miles by the wind and accounts for the rapidity with which rust infection spreads over large areas. Bolley investigated the vitality of spores from week to week and from month to month in different modes of keeping wheat and other straw affected with rust and has found proof that even dry fall winds and the severest winter frost do not kill the red spores. They even retain their vitality upon dead leaves, dead straw, and the partially dead leaves of living cereal plants or grasses. This fact, says Mr. Bolley in the weekly journal, "Science," will be of the greatest importance with reference to further investigations of the wheat rust.

It may be that the going over of the rust to the barberry plant will be considered as heretofore as a physiological necessity for the preservation of the fungi, but it can not any more be deemed as the exclusive means of propagation, which would have to be repeated annually before the rust could again attack the cereals.

INCANDESCENT GAS MANTLES.

Consul Walter C. Hamm, at Hull, England, thinks that gas companies and gas consumers in the United States will be interested in a statement concerning incandescent gas mantles, made at a recent meeting of the South Metropolitan Gas Company, of London.

These mantles, it was stated, are made of thorium, a rare earth, and only found in workable quantities in monazite sand. The sand from which the thorium used in Europe was extracted was obtained in Brazil, and was in the hands of two concessionnaires. They supplied the monazite to a number of chemists in Germany, who sold the sand to a group of

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continental firms who worked together and were known as the Thorium Convention. Thorium was in the hands of four or five firms, and two or three years ago it was sold at $8.36 per kilo. Later the price was $10.48, and now it is $13.36 per kilo. There was an absolute monopoly in it. The directors of the London Gas Company sent an agent to Brazil to endeavor to obtain a concession to export monazite sand, but without result. Last year another opportunity was afforded them of obtaining the concession. It was known that monazite sand was found in the Carolinas, in the United States, and an offer was made of this concession to the company, and after examining the property the offer was accepted. They had erected the machinery for working the deposit, and by taking this step they would have no difficulty in obtaining these mantles in the future.

If the claim made in respect to these incandescent mantles is correct, it will be well for manufacturers in America to see that a monopoly of the material from which they are made does not pass to Europe.

Reporting on the same subject, Consul Halstead calls attention to a speech by Sir George Livesey announcing the fact that his company—the South Metropolitan Gas Company—had secured a monazite sand property in the United States, in one of the Carolinas, doubtless the one referred to in Consul Hamm's report. Consul Halstead's report contains the report of the chairman of the South Metropolitan Gas Company as reported in the London Times, also a long series of details from the financial supplement of the London Times concerning thorianite, etc.

NEW PRODUCTS FROM RUBBER.

A correspondent writing from England to the New York India Rubber World for August says that a French rubber company of some prominence has recently patented a machine whereby the canvas in old rubber is entirely separated from the rubber. The process is quite mechanical, no chemicals or heat being used. In these days of high prices for rubber scrap such a process is, of course, of more interest than in the old days one can remember, when it was customary to burn insertion under the factory boilers.

The same correspondent furnished the following paragraph describing a pneumatic hub:

A good deal is being heard of the pneumatic hub which is to replace the ordinary rubber tire, with a great saving of rubber. I am told in one quarter that the idea is an old one, though it does not seem to have had much of a trial. Whether it is a novelty or not, a strong London syndicate is now engaged in developing it, and great results are expected. The claim is that by the fitting of a pneumatic cushion round the hub the same effect, as far as easy running is concerned, is obtained as in the case of the ordinary rubber tire encircling the rim.

KILLING DIPHTHERIA BACTERIA.

Consul-General Guenther, of Frankfort, reports that the president of the government of Wiesbaden has issued the following notice calling attention to the danger of diphtheria:

Through scientific investigation it has been ascertained that the bacteria of diphtheria adhering to eating and drinking utensils, retain

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life up to fifteen days, and that a sufficient removal of the infection can not be accomplished by washing the glasses and rubbing them dry with cloth. Neither can forks and knives be freed of infection by simply rubbing them. This is, however, accomplished within one minute by washing with a 2 per cent solution of soda of 50°. While calling attention in general to the danger of spreading diphtheria through eating and drinking utensils I call the special attention of proprietors of educational institutions and of hospitals to the fact that apparently healthy persons frequently carry diphtheria germs in the mouth, thereby infecting eating and drinking utensils, and in this way they may be instrumental in spreading the disease.

ELECTRICITY FROM AIR.

FRANKLIN'S KITE EXPERIMENTS FOLLOWED.

Consul-General Guenther, of Frankfort, Germany, reports a movement to make use of the air to produce electricity. He cites the work of a Russian scientist, Meischkin, who made experiments not unlike those made by Franklin a hundred years ago. He used a kite or kites, caught electrical currents in the upper air, drew from them electricity, which he harnessed to a small motor at the end of his electrically charged wires. When the kite was up 114 feet above the mountain top, upon which the experiments were made, sparks were visible in the electrical apparatus. At first they appeared every three or four seconds and then continuously. As soon as the motor was attached the sparks disappeared and the motor began to operate and went on working for over an hour, ceasing then only because the wind had subsided.

Just as soon as the wind increased the motor went to work again. Rain finally put an end to the experiments. The highest speed attained was 4,700 revolutions per minute, a rather remarkable speed under the circumstances, and the highest voltage was 32,000. The consul-general says the description of the apparatus is too unsatisfactory to justify one in giving it space. The great problem presented, it seems, is one of the weather. Only windy, fair weather seems suited. Still, so important is the question of power from industrial and economic standpoints, one feels justified in seeking its sources everywhere in the world. The sun, the sea, the air, the rivers are one day to do for the world what coal has done in the past and is doing to-day.

AN EXPERIMENTAL RAILWAY.

Consul-General Guenther, of Frankfort, reports that the management of the Prussian railroads are planning an experimental railway to test all improvements in railroading. The most varied trials in the field of electricity will be made a specialty. It is surmised that the proposed change to electric service of the city and the circle railroad (Ringbahn) has something to do with this project, which will be of the greatest importance to the whole German railway system. The experimental railway will be constructed in the beginning of 1906, near Oranienburg, not far from Berlin. It will be a circular road. A large establishment for impregnating railroad ties for purposes of preservation will be connected therewith.

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MISCELLANEOUS.

VITAL STATISTICS.

BIRTHS, MARRIAGES, AND DEATHS, BY COUNTRIES.

Mr. Walter T. Ballard, of Schenectady, N. Y., furnishes an interesting article on vital statistics, suggested by a paper on this subject prepared by Doctor Takano, of Japan. After careful study, Doctor Takano gives the annual increase per 1,000 of the population of various countries other than the United States as follows:

Norway, 13.9; Germany, 13.2; Holland, 12.3; European Russia, 11.9; Switzerland, 11.9; England, 11.5; Denmark, 10.9; Japan, 10.2; Belgium, 9.8; Hungary, 9.5; Austria, 8.9; France, 1.3.

The foregoing figures are the annual average of the past ten years. In 1901 Japan's rate of increase per 1,000 was 13.9, or 3.7 more than the average. The trifling increase for France, 1.3, is alarming to all wellwishers of that fair country. It was Von Moltke who significantly said, referring to the slow increase of population, "France is losing her battle every day." At that time the daily average of births in France was only 2,320, while in Germany it was 5,470, on an almost equal population.

To make his figures complete Doctor Takano gives the marriages per 1,000, births per 1,000 marriages, and the excess of births over deaths per 1,000. Those figures are, as far as obtainable:

Country.	Marriages.	Births.	Excess births.
France	7.50	22.1	0.06
Japan	8.78	29.8	8.9
England	7.80	30.0	11.7
Austria	8.00	37.1	10.6
Germany	8.20	36.1	13.9
Hungary	8.70	40.4	10.7
European Russia	8.60	47.1	14.6
Belgium			9.8

Doctor Takano points out to his countrymen that Japan's rates of increase, compared with European countries, except France, are far too low.

SUGAR BEETS.

ACREAGE OF EUROPE.

Consul Diederich, of Bremen, sends a list of Europe's beet-root acreage for a series of years. The importance of sugar in the world's markets makes the table important. He writes:

Though the prices of sugar in the markets of the world always did and always will fluctuate, as they are governed by the question of

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supply and demand, the acreage in Europe sown to sugar beets has steadily grown. While it, too, had its ups and downs, the number of acres devoted to the beet-sugar industry has almost been trebled within the last twenty-five years, as will be seen from the following table recently published by Otto Licht, the veteran sugar statistician:

Campaigns.	Acres.	Campaigns.	Acres.
1880–81	1,976,383	1893–94	3,484,763
1881–82	2,086,120	1894–95	3,775,061
1882–83	2,346,404	1895–96	3,311,671
1883–84	2,690,020	1896–97	3,789,901
1884–85	2,701,461	1897–98	3,734,508
1885–86	2,143,154	1898–99	3,869,847
1886–87	2,462,220	1899–1900	4,144,046
1887–88	2,184,096	1900–1901	4,552,014
1888–89	2,469,892	1901–2	4,849,881
1889–90	2,795,371	1902–3	4,415,667
1890–91	3,098,924	1903–4	4,338,392
1891–92	3,186,804	1904–5	3,980,358
1892–93	3,213,479	1905–6	4,643,037

GOLD PRODUCTION.

EXPECTATIONS IN GREAT BRITAIN.

The world's production of gold, according to English papers, for 1903 and 1904, was as follows:

Country.	1904.	1903.
United States	$82,293,780	$71,626,801
Canada	16,945,153	18,331,609
Mexico	10,405,336	9,910,588
Russia	21,899,250	24,313,345
Transvaal	75,833,365	59,623,656
Rhodesia	4,516,223	3,956,887
British India	11,140,269	10,842,630
Australasia	84,447,138	86,825,081
Other countries	34,065,500	32,416,485
Total	341,546,014	317,847,082

In a short time, if Great Britain's efforts to solve the labor problem by the introduction of Chinese coolies is successful, the Transvaal will lead the world as a gold producer. Contracts for 100,000 coolies have been signed; up to date no more than 50,000 have been employed. If, as reported, the Transvaal is so rich that many billions can be talked of, South Africa's gold yield will be easily—under peaceful conditions—$100,000,000 a year, a sum that is sure to most favorably affect that part of the world if judiciously and wisely invested.

FUTURE OF MANILA.

COMMERCIAL RIVAL OF HONGKONG.

The Anglo-Japanese Gazette for August contains an article on the present growth and future importance of Manila as a commercial center, which was contributed by Mr. Walter J. Ballard, of Schenectady, N. Y. Referring to the improvements being made by the United

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States in the harbor and their value to shipping, Mr. Ballard says Manila in the near future will prove a formidable rival to Hongkong as a center for trade and shipping. Mr. Ballard says:

Already the chairman of the Hill line of steamships has emphatically stated that his company will make Manila the distributing and collecting point for their trade with French China, the Straits Settlements, Java, Borneo, India, and Australia. This alone will open a new avenue for Philippine enterprise, and American commerce with these countries will use the port of Manila to and from the Pacific coast to the Far East. The insular government is providing the facilities for handling cargo rapidly, the completion of which will bring business—the greater the facility the greater the use. Given completed harbor improvements at Manila, the trade of the islands will improve and improve rapidly. Given the completed Panama Canal, the increase will be larger and far more rapidly increased. The advantages that will accrue to American shipping lines by the completion of the canal are great, but with regard to Manila the bearing that the Panama route will have on Far Eastern commerce will be singularly significant.

RAILWAYS OF THE WORLD.

Consul-General Guenther, of Frankfort, supplies the following remarkable railroad statistics:

MORE THAN ONE-HALF MILLION MILES.

According to the most recent German statistics, the length of the railroads of the world was 537,105 miles on December 31, 1904, of which 270,386 miles were in America, 187,776 in Europe, 46,592 miles in Asia, 15,649 miles in Africa, and 16,702 miles in Australasia. Of the mileage of European railroads Germany stands first (34,016), followed in their order by Russia (33,286), France (28,266), Austria-Hungary (24,261), the United Kingdom (22,592), Italy (10,025), Spain (8,656), Sweden and Norway (7,730). The average cost of construction of the European railroads per mile is estimated at $107,577, while for the remainder of the world the estimate is only $59,680. The total value of the railroads of the world according to these statistics is $43,000,000,000, of which the European roads figure for $22,000,000,000. The estimate for rolling stock is as follows in numbers: Locomotives, 150,000; passenger coaches, 225,000, and freight cars, 3,000,000.

COMPARISON OF RATES.

Compilations made from foreign and domestic statistics show a freight rate on English roads of nearly 2 cents per mineral ton-mile. The actual figures are 1.93 cents. A ton-mile of merchandise or live stock costs 2.94, and on all commodities an average of 2.32. Against these the figures for the United States are startlingly small, being 0.58 cent. On German roads it is 1.42 cents; on French, 1.55; Austrian, 1.16, and Hungarian, 1.30.

England's passenger rates per mile according to the business magazine, on the same classes as those cited for the United States, were 4 cents, Germany's 3.8 cents. For their average day's wages workmen

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can travel as follows: American 65 miles, British 35, German 53, French 40, Belgian 36, Italian 38, and East Indian 21.

On American roads locomotive engineers average $4 a day, English $1.62, Belgian $1.01; American firemen get $2.28, British 91 cents, Belgian 72 cents. Railroad laborers in the United States get from two to four times as much as laborers on foreign roads. Forty per cent of the gross earnings of American railroads goes to labor, while only 25 per cent goes to capital.

In England labor gets 27 per cent, capital 38 per cent; in Germany the division is equal.

In the last four years American roads paid $874,000,000 for cars, engines, etc. The roads were capitalized at $12,792,806,023 (now $16,000,000,000), on the basis, in 1903, of $61,369 per mile. English roads that year stood for $277,474 per mile, German roads for $104,725, French for $143,053, Russian for $76,095, Austrian $110,475, Belgian $167,898.

SHIPS BUILT LAST YEAR.

According to Lloyds the United Kingdom launched 712 new ships, aggregating 1,205,162 tons displacement, during last year. She also launched 37 ships of war, aggregating 127,175 tons. One, the *Caronia*, displaced 20,000 tons; another, the *Victoria*, 14,000 tons, is the largest turbine ship afloat.

The United States launched 227 merchant ships of more than 100 tons each, with a total tonnage of 238,518 tons. Besides these there were launched 19 war vessels, aggregating 170,885 tons. Germany came third, with 149 merchant vessels, aggregating 200,000 tons, and 11 ships of war, aggregating 44,970 tons. France was fourth, with 80,000 tons in 67 merchantmen, and 43,600 tons in 9 ships of war. Italy was fifth—8 merchant vessels, aggregating 30,000 tons, and 8 war ships, 28,662 tons.

SUEZ CANAL IMPROVEMENTS.

According to the latest German reports, the Suez Canal is now twice as deep and wide as it was twenty years ago. The work of deepening the canal will continue until a depth of 30 feet throughout is attained. From Suez to El Ferdan, 38 miles, the bottom width is 126 feet instead of 118 feet its former width. The bends of the canal have also been corrected, so that the width of the water surface of the northern half is 295 to 350 feet, and of the southern half 230 to 300 feet.

CARP AGAINST MOSQUITOES.

In the Universal Fishery Journal of Germany attention is called to the fact that fish destroy many annoying insects, especially mosquitoes. In Germany the common carp, the crucian carp, and the red eye, are considered the best insect-destroying fish. The committee created to consider the mosquito plague at Eltville-on-the-Rhine asks for information whether the kinds of fish named are really destroyers of the larvæ of mosquitoes on a large scale. It should be observed how many larvæ one fish eats per day; and whether other fish are as efficient in destroying these larvæ. Above all it is important that such fish can live in stagnant and putrid waters, because in such only the mosquito larvæ develop.

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WORLD WHEAT CROP.

REQUIREMENTS OF VARIOUS COUNTRIES.

The London Daily Express, furnished by Consul-General Wynne, says that the following table indicates the amounts of wheat required by the respective countries to piece out their own production:

	Quarters.
The United Kingdom	25,000,000
Germany, Belgium, and Holland	16,000,000
Italy	4,000,000
Switzerland, Greece, and Scandinavia	4,500,000
France	3,500,000
Spain and Portugal	3,000,000
Ex European countries	7,000,000
Total	63,000,000
Balance (showing surplus)	11,500,000
Total	74,500,000

The following shows the countries having surpluses:

	Quarters.
The United States and Canada	22,000,000
Russia	14,500,000
Roumania and Bulgaria	10,500,000
Chile, North Africa, and Turkey in Asia	1,500,000
Argentina (balance of last year's crop and a portion of the new crop just showing above ground)	12,000,000
Australasia (the same applies here as to Argentina)	5,000,000
India (balance of last year's crop and a small portion of the crop about being planted)	7,000,000
Austria-Hungary	2,000,000
Total	74,500,000

The report further shows the relative production, consumption, etc., of the different countries. Argentina is rapidly reaching up to the second place long occupied by Russia. Canada is to furnish 4,000,000 quarters of the 22,000,000 quarters put down as surplus of the United States and Canada. The Express says, in concluding:

It is not nearly so difficult to estimate the probable run of prices now as it was last year. This year the prospect is distinctly more favorable, and although prices of wheat, flour, and bread are now very reasonable there is no likelihood whatever under normal conditions of any advance in quotations. There is considerably more than enough wheat to go around, and as the terrible war between Japan and Russia, which has so long been a disturbing element, is now happily terminated, the trend of values will be to rather a lower level unless something unexpected and unforeseen should arise, such as alarming political complications or serious damage to the Argentine, Australian, or Indian crops.

In this connection a report inclosing a clipping from Consul-General Bradley, of Manchester, is interesting. He says that little grain is now imported into the United Kingdom from the United States, and that, according to a recent report of the Canadian government, it will be many years before Canada can supply the needs of England in addition to her home demand.

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CONSUMPTION OF TOBACCO.

THE UNITED STATES AT HEAD OF LIST.

The Bureau of Statistics, Department of Commerce and Labor, has prepared an interesting statement on the consumption of tobacco, from which it appears that the United States leads all other nations in the total consumption, while Belgium stands at the head of the tobacco-consuming countries so far as the per capita consumption of the "fragrant weed" is concerned. The United States, Germany, and Russia are the only countries which show a total consumption of over 100,000,000 pounds.

While the habit of using tobacco may be regarded as well-nigh universal, the per capita consumption in the different countries shows the most varying quantities, as can be seen from the following table, showing the total and per capita consumption in the principal countries during the most recent available year:

Country.	Total consumption.	Per capita consumption.
	Pounds.	*Pounds.*
United States	[a] 440,000,000	5.40
Germany	201,783,000	3.44
Russia	150,244,000	1.10
France	84,393,000	2.16
United Kingdom	83,378,000	1.95
Austria	78,755,000	3.02
Hungary	47,905,000	2.42
Belgium	44,273,000	6.21
Italy	34,549,000	1.05
Canada	[a] 15,400,000	2.74
Mexico	18,870,000	1.39
Australia	10,158,000	2.59

[a] Partly estimated.

PUBLIC REVENUE DERIVED.

The following table shows the revenue derived by the governments of the principal countries from the taxation of tobacco during the most recent available year:

Country.	Total revenue (customs and excise).	Per capita tax.	Tax per pound of tobacco consumed.
	Dollars.	*Dollars.*	*Cents.*
United States	65,832,102	0.80	15.0
France	[a] 81,063,000	2.08	[a] 96.1
United Kingdom	63,806,000	1.49	76.5
Italy	[b] 31,482,000	[b] .95	[b] 91.1
	[c] 40,528,000	[c] 1.22	[c] 117.3
Austria	[b] 27,443,000	[b] 1.04	[b] 34.9
	[c] 44,633,000	[c] 1.69	[c] 56.7
Russia	24,254,000	18	16.1
Germany	16,567,000	.28	8.2
Hungary	[b] 14,264,000	[b] .72	[b] 29.8
	[c] 22,484,000	[c] 1.14	[c] 47.0
Canada	5,775,702	1.03	37.5
Belgium	1,687,000	.38	3.8
Mexico	1,183,000	1.04	6.3

[a] Total gross revenue from monopoly. The net revenue is about 80 per cent of the gross revenue.
[b] Net revenue from monopoly.
[c] Gross revenue from monopoly.

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MAGNESITE.

THE COST IN GREECE.

In reply to communications from the United States asking explanation of certain statements contained in a report by the late Consul Daniel E. McGinley on magnesite, Consul Horton, of Athens, Greece, writes:

The "ton" referred to in the report is of 2,240 pounds. Raw magnesite costs from 19 to 22 francs gold per ton of 2,240 pounds f. o. b. at the Island of Euboea, where the quarries are located. Caustic calcined magnesite costs, f. o. b. at Euboea, from 67 to 70 francs gold, according to the quantity bought. The price includes cost of bags. Dead burnt magnesite brings 5 francs more per ton.

It will be observed that since the date of Consul McGinley's report, September 15, 1904, the prices of magnesite have increased. This is due to several causes: (*a*) The demand, both local and foreign, has grown; (*b*) the two principal companies here have formed a trust or syndicate, thus eliminating competition; (*c*) the fall in the exchange has raised the value in gold of the paper drachmas, and has thus rendered labor more expensive. The address of the Anglo-Greek Magnesite Company is 24 Finsbury square, London, England; its agent here is G. F. Harr.

Freight from Euboea to New York is 9s. 3d., to Philadelphia 1s. more, per ton.

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CONSULAR REPORTS.

The publications made up chiefly of reports from United States consular officers in foreign countries include the following:

COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.
REVIEW OF WORLD'S COMMERCE, being a summary of the annual reports contained in COMMERCIAL RELATIONS.
DAILY CONSULAR AND TRADE REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the press, commercial and industrial organizations, manufacturers, etc.
MONTHLY CONSULAR AND TRADE REPORTS, issued monthly, containing miscellaneous reports from diplomatic and consular officers.
SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

The above consular reports were, until July, 1903, issued by the Bureau of Foreign Commerce of the State Department; from that date until June, 1905, they were issued by the Bureau of Statistics of the Department of Commerce and Labor, with which the Bureau of Foreign Commerce of the State Department was consolidated; since July 1, 1905, they have been issued by the Bureau of Manufactures, Department of Commerce and Labor. For details of these publications, the subjects of which the special reports treat, and the reports remaining for distribution, address "Chief, Bureau of Manufactures, Department of Commerce and Labor, Washington, D. C."

The publication of the reports on special subjects, in separate form, was begun in 1890. Those of the following titles are now available for distribution:

Vol. 2 (1890 and 1891).—European Emigration; Olive Culture in the Alpes Maritimes; Beet-Sugar Industry; Flax Cultivation in Foreign Countries.
Vol. 6 (1891 and 1892).—Coal and Coal Consumption in Spanish America.
Vol. 10 (1894).—Extension of Markets for American Flour. (New edition, 1897.)
Vol. 11 (1894).—American Lumber in Foreign Markets. (New edition, 1897.)
Vol. 14 (1898).—The Drug Trade in Foreign Countries.
Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe; Rabbits and Rabbit Furs in Europe; Cultivation of Ramie in Foreign Countries.
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VALUES OF FOREIGN COINS AND CURRENCIES.

[As given by the Director of the United States Mint and published by the Secretary of the Treasury, April 1, 1905.]

COUNTRIES WITH FIXED CURRENCIES.

Countries.	Monetary unit.	Value in U.S. gold, 1905.	Coins.
Argentina	Peso	$0.96,5	Gold—argentine ($4.82,4) and ½ argentine; silver—peso and divisions.
Austria-Hungary	Crown	.20,3	Gold—20 crowns ($4.05,2) and 10 crowns.
Belgium	Franc	.19,3	Gold—10 and 20 francs; silver—5 francs.
Brazil	Milreis	.54,6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
British N. A. (except Newfoundland).	Dollar	1.00	
British Honduras	do	1.00	
Chile	Peso	.36,5	Gold—escudo ($1.825), doubloon ($3.65), and condor ($7.30); silver—peso and divisions.
Colombia	Dollar	1.00	Gold—condor ($9.647) and double condor; silver—peso.
Costa Rica	Colon	.46,5	Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centisimos.
Cuba	Peso	.91	Gold—doubloon ($5.01,7); silver—peso (60 cents).
Denmark	Crown	.26,8	Gold—10 and 20 crowns.
Ecuador	Sucre	.48,7	Gold—10 sucres ($4.8665); silver—sucre and divisions.
Egypt	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland	Mark	.19,3	Gold—10 and 20 marks ($1.93 and $3.85,9).
France	Franc	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Mark	.23,8	Gold—5, 10, and 20 marks.
Great Britain	Pound sterling	4.86,6½	Gold—sovereign (pound sterling) and half sovereign.
Greece	Drachma	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	Gourde	.96,5	Silver—gourde.
India	Pound sterling[a]	4.86,6½	Gold—sovereign (pound sterling); silver—rupee and divisions.
Italy	Lira	.19,3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Japan	Yen	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia	Dollar	1.00	
Mexico	Peso	.49,8	Gold—5 and 10 pesos; silver—peso and divisions.
Netherlands	Florin	.40,2	Gold—10 florins; silver—½, 1, and 2½ florins.
Newfoundland	Dollar	1.01,4	Gold—$2 ($2.02,7).
Norway	Crown	.26,8	Gold—10 and 20 crowns.
Panama	Balboa	1.00	Gold—1, 2½, 5, 10, and 20 balboas; silver—peso and divisions.
Peru	Sol	.48,7	Gold—Libra ($4.8665); silver—sol and divisions.
Philippine Islands	Peso	.50	Silver—peso, 50, 20, and 10 centavos.
Portugal	Milreis	1.08	Gold—1, 2, 5, and 10 milreis.
Russia	Ruble	.51,5	Gold—imperial ($7.718) and ½ imperial ($3.859); silver—¼, ½, and 1 ruble.
Spain	Peseta	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden	Crown	.26,8	Gold—10 and 20 crowns.
Switzerland	Franc	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Piaster	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	Peso	1.03,4	Gold—peso; silver—peso and divisions.
Venezuela	Bolivar	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

COUNTRIES WITH FLUCTUATING CURRENCIES.[b]

Country and monetary unit.	July 1, 1904.	Oct. 1, 1904.	Jan. 1, 1905.	Apr. 1, 1905.	Country and monetary unit.	July 1, 1904.	Oct. 1, 1904.	Jan. 1, 1905.	Apr. 1, 1906.
	Cts.	*Cts.*	*Cts.*	*Cts.*		*Cts.*	*Cts.*	*Cts.*	*Cts.*
Bolivia:					China—Continued.				
Silver boliviano	40.3	42.2	43.1	43.9	Hongkong tael	(c)	(c)	(c)	(c)
Central America:					Nankin tael	65.4	68.4	69.9	71.2
Silver peso	40.3	40.3	43.1	43.9	Ningpo tael	63.5	66.5	67.9	69.1
China:					Niuchwang tael	62	64.8	66.3	67.4
Amoy tael	66.1	69.1	70.7	71.9	Peking tael	64.4	67.4	68.9	70.5
Canton tael	65.9	68.9	70.5	71.7	Shanghai tael	60.3	63.1	64.5	65.7
Chifu tael	63.2	66.1	67.6	68.8	Swatow tael	61	63.9	65.3	66.4
Chinkiang tael	64.5	67.5	69.0	70.3	Takau tael	66.5	69.6	71.1	72.4
Fuchau tael	61.1	63.9	65.4	66.5	Tientsin tael	64	67	68.5	69.7
Haikwan (customs) tael	67.2	70.3	71.9	73.2	Persia:				
Hankau tael	61.8	64.7	66.1	67.3	Silver kran	7.4	7.8	7.9	8.1

[a] The rupee, $0.3244½, 15 to the sovereign, is the money of account.

[b] The coins of silver-standard countries are valued by their pure silver content, at the average market price of silver for the three months preceding the date of the circular.

[c] The "British dollar" has the same legal value as the Mexican dollar in Hongkong and Labuan.

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DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF MANUFACTURES

MONTHLY CONSULAR AND TRADE REPORTS

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MONTHLY CONSULAR *and* TRADE REPORTS

Washington, D. C. OCTOBER, 1905 No. 301

THE ORIENT.

In this number much interesting matter will be found from Japan and China. Special Agent Crist contributes two letters, which contain facts and suggestions of value to persons interested in the oriental trade. Special Agent Burrill furnishes several contributions regarding conditions in China of like value, and the letters of both special agents are supplemented by reports from Consul Miller, at Yokohama, Consul Harris, at Nagasaki, Consul Anderson, at Amoy, and Consul-General Sammons, at Niuchwang, that are marked by intelligent discrimination in the selection of subjects and ability in their treatment.

EMPIRE OF JAPAN.

TRADE OF KOBÉ AND VICINITY.

RAPID GROWTH OF COMMERCE—INDUSTRIAL DEVELOPMENT AND GOVERNMENTAL AID—AMERICAN GOODS PREFERRED.

In the following report Special Agent Crist furnishes American merchants and manufacturers with an excellent outline of the work being done in the business world in and about Kobé, a city that Mr. Crist puts at the head of the Japanese Empire's importing and exporting centers. Mr. Crist deals in considerable detail with conditions affecting trade in the Kobé district, but common to all parts of the Empire. He points out the possibilities for certain lines, calls attention to the goods that are going in now, and to the kinds that might make their way if judiciously handled. The report is a remarkably good and timely one. It substantially confirms all that has been said about the outlook in Japan by the consular officers of the United States stationed in that country. Careful consideration of the strong points made by Mr. Crist will result in a reorganization of American methods where those methods conflict, as they sometimes do, with the long-established customs of the Japanese.

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Mr. Crist begins by calling attention to the importance of Kobé, the volume of its trade and its favorable situation. He furnishes figures to support the city's claim to preeminence and shows the shares of the different nations dealing with Kobé houses. He points to the delays due to incomplete and inadequate landing and handling facilities, citing the fact, however, that large deposits of goods now on the docks were rushed in to get ahead of a new tariff—not an uncommon thing in western countries. Parliament, it is thought, will put up a couple of millions of dollars to remedy this evil. The report is so full of suggestions that one is at a loss in making selections of the most salient ones. Wages range at such infinitesimally small rates that one wonders how it is possible for so poorly paid people to get enough rice, the staple food, to keep body and soul together. Mr. Crist calls attention to some curious forms of paternalism, under which the Government undertakes the establishment of certain works and turns them over, on a paying basis, to private parties. He enumerates a large number of commodities which sell well now, and the sales of which he thinks might be increased. The outlook for American manufactures in Kobé, and, in fact, in all parts of Japan, is exceedingly favorable, provided proper methods are undertaken to secure and retain it.

JAPAN'S COMMERCIAL GATEWAY.

The port of Kobé is the great gateway through which Japan receives the bulk of her imports from the entire world. Through this port alone there comes annually nearly 50 per cent of the raw materials and those manufactures which enter so largely into the great industrial system which is now being built up throughout the Empire. This city is also a great shipping point for Korean and northern Chinese ports. Much of the merchandise destined for Manchuria and China is shipped nowadays from Kobé to Nieuchwang and Tientsin. This importance which Kobé is steadily maintaining is, in a measure, due to the advanced position which the Japanese have taken as a commercial and manufacturing people, making it a most desirable market for the entire world to sell in, and to the establishment in Osaka and in the southwestern provinces of immense manufacturing plants, where great quantities of raw materials are consumed.

MOVEMENT OF TRADE.

To give some idea of the relative importance of Kobé to the Empire, it may be shown that the total imports of Japan in 1904 amounted to 371,360,739 yen, of which Kobé received 174,855,201 yen, which, with the imports of 16,977,392 yen into Osaka, with which Kobé is closely connected in interests, placed the imports of this district ahead of all the other ports of Japan combined. During the six months ended June 30, 1905, this port received imports valued at 137,070,000 yen out of a total of 286,462,862 yen for Japan. The principal articles were machinery, locomotives, machine tools, flour,

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sole leather, pig iron, iron ingots, bars, sheets, and plates, pig lead, lead ingots and slabs, nails, kerosene oil (in cans), sugar, raw cotton, cotton shirtings, drills, flax, blankets, tobacco, fertilizers, cotton prints, Italians, and satins, and a general list comprising various manufactures.

The exports amounted in 1904 to 319,260,896 yen for Japan, and for Kobé 87,976,178 yen, and during the six months ending June 30, 1905, they were 40,630,000 yen out of 142,767,953 yen for the Empire. Kobé's exports may be enumerated as tea, rice, fish, sake, cotton yarns, matches, sea products (dried fish, seaweeds, etc.), cotton underclothing, camphor, copper, silk Turkish towels, cigarettes, fans, mats and matting, straw manufactures, umbrellas, porcelains, and general manufactures.

From the above list of principal imports and exports it is evident that there is great importance to be attached to the port of Kobé when considering the business of Japan and her relations with the world at large. The share which the United States claimed of the total imports of Kobé for the last six months was 32,844,411 yen, an increase of more than 21,000,000 yen over the corresponding period for 1904. This is due in great part to the increased purchases of raw cotton, which, while slightly less than 3,000,000 yen in the six months of 1904, was 18,250,000 yen during that time in 1905.

Kobé has one of the best natural harbors in Japan. It can accommodate the largest steamships afloat. All cargoes have to be landed by means of lighters from the ships. The customs facilities are entirely inadequate to the demands of the commerce. During the past five or six months great inconvenience and financial loss has fallen upon all persons engaged in importing and exporting.

CONGESTION OF MERCHANDISE.

At present great congestion of merchandise of all descriptions is noted throughout the water front. Complaints are made on every hand regarding the inability of ships to discharge their cargoes. Lighterage charges are high in consequence of the great shortage in the number of lighters. Cargoes are now upon lighters which were taken from the ships two, three, and even five weeks ago, with no opportunity to land the shipments. Cotton bales and merchandise of every description have been placed along the water front for miles, unprotected from the elements. A great deal of this is due to the unusual inrush of goods prior to July 1 last, when the new tariff rates went into effect. Instances have been cited where goods have been held on lighters for forty-one days before delivery could be made at the landing place. This condition is deplored by all concerned, but the responsibility appears not to belong to any one branch. It is confidently expected that the coming session of the Imperial Diet will make an appropriation of 4,000,000 yen for rebuilding the custom-houses. When this shall have been accomplished it is the intention of the Kobé city government to institute dock and harbor improvements in conjunction with the Imperial Government, so that it may be possible to make direct landing of all cargoes instead of by the present method. Importing and exporting, together with those activities incident thereto, engage the largest number of people of Kobé of any one vocation.

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MANUFACTURE OF MATCHES.

The match factories employ about 60,000 people, mostly women and children, in all of the branches of the business, including the making of the boxes, cases, etc. There are 32 factories, many of which are operated by hand power, while some of them employ gasoline engines and others employ steam power. Thousands of families are engaged in their homes in making matches on a small scale and in making the small boxes in which they are packed. The greatest portion of the match production of Kobé is for export, and amounts to from 8,000,000 to 10,000,000 yen annually. Great quantities of match sticks and wood for boxes are made for export to China, where the finished article is produced. The average of wages earned by match workers is about 12 sen a day, while the range is from 5 to 28 sen a day (about 2½ to 7 cents), the basis being piecework.

KOBÉ'S ENTERPRISE.

A large and well equipped cotton mill was lately opened here with about 3,000 operatives. The Kawasaki dock yards employ 6,000 people; the Sanyo and Government railways about 3,000, while general small local business engages many thousands. The stores and shops all present a fine, prosperous appearance, with well-kept stocks, and every attention is shown both the foreign and native customers. Prices of dry goods imported from England are very high. With this exception, prices of articles are generally low, compared with those one finds at home, and business appears to be brisk and satisfactory. In many of the Japanese stores prices are marked in plain figures, from which reductions are not made, reminding one in this and in many other respects of the business methods pursued in the best up-to-date American business houses. The foreign goods most in evidence are from England and Europe, especially in dry goods lines, and there are two dry goods, outfitting, and general merchandise stores kept by Englishmen, where only English goods are offered for sale.

Kobé was founded in 1868 as a settlement for foreigners, most of whom were importers whose interests were in Hyōgo, at that time the principal port. The Japanese merchants of Hyōgo, to facilitate business, gradually moved nearer the foreign settlement, until Kobé now far exceeds Hyōgo in commercial importance and activities, has a population of 300,000, and is a thriving, prosperous Japanese city. The foreign element numbers about 1,000.

GOVERNMENTAL ENCOURAGEMENT.

The Imperial Government gives every encouragement to increase the manufactures of Japan, and by reason of the deposits of coal in Kinshu and the cheap water transportation afforded by inland-sea sailing vessels, carry the coal cheaply to the cities along its shores. Chief among these manufacturing cities is Osaka, situated within 20 miles of Kobé. Kobé and Osaka are connected by steam and electric railways, and the distance may be covered in an hour and an hour and forty minutes, respectively, by the above systems. The electric tramway was projected in 1899, and is equipped throughout with American apparatus, dynamos, motors, rails, etc. The first cars ran over the road in March last, and the earnings have been equal to the most

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sanguine expectations. The stock, at 50 yen par, has a market value of 83 yen, and a dividend at the rate of 5 per cent per annum has been declared. The capitalization is 1,500,000 yen, fully paid up.

Although there are deposits of coal in the island of Hokaido it contains no safe harbors for small sailing vessels, and the cost of transportation of coal over the railway prohibits its use in the southern part of the Empire. The northern provinces are given over to farming, the conditions and population being adapted to that pursuit. In the southern portion of the Empire, which is more in the line of travel between America and China and offers natural advantages in harbors and coaling facilities, there have been established by the Government many manufactories which were later sold to private individuals after they had been placed upon a paying basis.

PATERNALISM.

This system of paternalism may be well exemplified by citing the case of the Kawasaki dockyards at Kobé. Started by the Imperial Government as a Government dockyard, it was sold to Mr. Shozo Kawasaki in 1886 and comprised 9 acres of land, within whose limits were located two patent slips and the necessary buildings. To-day the yards cover over 40 acres of land, with a frontage along almost the whole length of the west shore of Kobé Harbor. In 1896 the Kawasaki Dockyard Company (Limited) was incorporated with a capitalization of $2,000,000, in shares of 50 yen ($25). This is held by 129 stockholders, who receive a regular 12 per cent dividend upon their holdings. Ships ranging from 1,000 to 8,000 tons can be built simultaneously. Two more shipbuilding berths are under construction for ships of not less than 20,000 tons.

Besides a fine graving dock over 425 feet in length, the construction of which involved an expenditure of $800,000, the yard is equipped with the best machinery obtainable from the most advanced models throughout the world, the most expensive one being a boring machine purchased in America at $25,000. Electricity, steam, and water power are all used in the works. It contains up-to-date tool shops, carpenter, boiler, blacksmith, and coppersmith shops, and is about to add punching and machine, slab-bending and forging shops. The foundry is equipped with four cupolas, with capacities of 2, 3, 5, and 8 tons, respectively. Two powerful 20-ton overhead traveling cranes, controlled by electricity, and two 5-ton electric cranes are also in the foundry. A projectile shop for the manufacture of projectiles is a feature of importance, though somewhat unusual in a dockyard equipment. There is also under construction an erecting shop, which will contain 40 and 20 ton electric overhead traveling cranes. At present this plant is working day and night.

GOVERNMENTAL AID.

What has been said of the Kawasaki dockyard, so far as governmental inception is concerned, may be said of other industrial enterprises. Launched by Government experts, whose knowledge had been acquired in study in foreign lands, at a time when private enterprise was a mental and financial impossibility, these modern industrial ventures were taken through the experimental stage to the point where they could become self-sustaining under private direction, and

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then they were disposed of to individuals under whose operation they have brought commercial success to the country. Similar steps were taken by the Government in cotton weaving, in steel casting, and other industries, all of which have built up an immense demand for foreign machinery, ores for smelting purposes, iron in bars, rods, plates, ingots, and pigs, lead, zinc, leather, cotton, cotton yarns, kerosene oil, and a great variety of other raw and partly manufactured materials. These imports are received in greatest quantities at Kobe, whence they are distributed throughout the southern and southwestern provinces surrounding the Inland Sea, including the islands of Shikoku and Kiushu, and to the northern and eastern provinces, including Kyoto, and as far as Nagoya in Aichi prefecture.

SHIPS ENTERED AND CLEARED AT KOBE.

During the past year the number of ships entering the port of Kobe was 1,560, with a tonnage of 3,354,989. The number from the United States was 97, with a tonnage of 391,345. British shipping exceeded all others, being 603 ships with a tonnage of 1,669,299. Germany came next in tonnage with 527,300 and 202 ships, which was less than Japan with 375 ships but of less tonnage, amounting to 353,271. America ranks third in point of tonnage, but is fifth in actual number of ships, Norway being represented by 143 ships with a tonnage of but 135,609. The same relative standing is maintained in vessels cleared, the numbers and tonnage being slightly less than vessels entered. The above refers to steam vessels only. There were but 21 sailing vessels entered and 15 cleared, of which 3 vessels entered and 2 cleared were American.

SALABLE FOREIGN COMMODITIES.

From a study of this market it would appear that sole leather, finer leathers from the cow and calf, condensed milk, flour and wheat, canned foods, cotton underwear, sewing machines, electric motors, apparatus and instruments, lathes, rail fittings, mercury, kerosene oil, lubricating oil, paraffin wax, cardboard, leaf tobacco, oak bark, tin foil, rosin, lead ingots, pig lead, and slab lead are among the principal commodities imported, of which America supplies the whole or almost the entire amount.

In cotton duck, drills, gray shirtings, and raw cotton the use of American productions has been greatly increased during the past year. During the six months ended June 30, 1905, the consumption of raw cotton among the spinning mills of Japan has been 27,710,563 pounds. Of this the amount of American cotton used was 3,048,162 pounds, which is more than double the amount consumed last year. Indian cotton composed one-half of the entire amount, while 34 per cent was Chinese cotton.

When it is known that the amount of raw cotton consumed during the first half of this year showed an increase of more than 37 per cent over the corresponding period of the past year and about 9 per cent over the first half of the year 1903 the outlook for American cotton at Kobé is encouraging. It also indicates an advance by the Japanese in their abilities to produce a higher grade of cotton cloths. Greater quantities of American cotton will be needed by the Japanese in the future than in the past, as the short staple of India and China cotton unmixed with the American article does not meet the needs of their factories.

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AMERICAN GOODS FAVORITES.

On every hand there are calls for American dry goods, groceries, shoes, hats, clothing, etc., by the Americans throughout Japan. I met Americans in Karnizawa, Shinsu Province, in the central portion of the island, who were from all parts of Japan, as well as in Tokyo, Yokohama, Kyoto, and in Kobe, and they all are emphatic in the belief that there is a good opportunity for the establishment of a store dealing in American goods. Such a store established in Tokyo or Yokohama would in all probability meet with success, as the people living in other cities are obliged to buy locally from unsatisfactory stocks of European goods or to send to America, as most of them do, for what they want. As Tokyo is in the geographical center of Japan, it is within a few hours of almost every city of the Empire, and shopping is now frequently done in that city by those living at a distance. With a good stock of American goods a good business could be done. Prices of European goods, as I have said, are high and the stock unsatisfactory, still, in spite of these conditions, the merchants handling such goods do a thriving business. Cotton elastics, which ordinarily retail at home at from 3 to 5 cents per yard, sell here at from 15 to 30 cents per yard; other notions range accordingly. Ribbons of every variety sell at prices ranging from double to treble and quadruple the prices in America. Flannels, underwear, hosiery, hats for women and children all bring prices that are unreasonably exorbitant when compared with American standard.

Groceries are also high in price. Crackers, similar to those in America sold at from 5 to 15 cents per pound, bring from 30 to 50 cents. These are sold in tin-lined boxes, with the paper cover over the box, presenting an appearance similar to the popular method of packing crackers in America. The tin box is absolutely necessary in shipping such goods to this country or selling them, by reason of the long ocean voyage and the excessive moisture in the Japanese climate. The English appear to be the only people selling such goods in Japan. Canned meats, tinned, preserved, and dried fruits are being consumed in greater quantities by the Japanese, while no meal of a foreigner is complete without jam, marmalade, or preserved fruit of some kind.

A large business can be built up by an enterprising American fruit canning and preserving company in putting up their jams, marmalades, and preserves in light-weight tin cans with covers removable by the key method or in glass jars with metal screw tops. This especially is true of canning or preserving companies on the Pacific coast, where enough fruit doubtless spoils annually which, if cared for in the manner above indicated and shipped to this market and to China, would bring large profits.

JAPAN'S COMMERCIAL PLANS.

On every hand it is apparent that the great effort on the part of the Japanese after the termination of the present war is to take complete commercial possession of the immense Manchurian, north China, and Korean markets by exporting to those countries every commodity now purchased by those people. At present and since the early stages of the war colonization of Korea has been going on by Japan. Thousands of Japanese have entered that country and established themselves in all lines of business. Many others have taken up farming, as a large market is offered here for beans and rice. The entire field traversed by the Japanese armies has been vigorously exploited by the exporta-

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tion of cotton goods and yarns, tobacco, tea, saké, condensed milk, beer, wine, bricks and tiles, matches, mineral waters, umbrellas, vegetables, canned goods, kerosene oil, ropes, bags, etc. Much of the above have doubtless been used by the soldiers, but the bulk was for the use of natives and foreigners as well. A great many of the articles sold are spurious imitations of American goods and are offered under false trade-marks. As the great mass of people to be supplied in these countries are natives who can not discriminate between the genuine and spurious label, it is evident that unless proper safeguards are taken the share which Americans should have in the business will be hard to control when cheap imitations are offered by the side of the higher priced genuine article.

KOBÉ, KOREA, AND CHINA.

Shipments are regularly made from Kobé and Osaka of merchandise destined for Korea and China. Old steamship lines, which were driven from the sea by the presence of the Russian fleet, have been restored, and many new lines started, giving frequent sailings between Japanese, Korean, and Chinese ports, via Moji and Shiminoseki, Japan; Fusan, Chemulpo, Mokpo, and Chinnampo, Korea, to Chefoo, Taku, and Niuchwang, China.

While it is quite apparent that strenuous efforts are being made to build up a large Japanese trade with the adjacent Asiatic countries, it is believed that the present methods pursued by these people will not achieve the result of driving out other competitors. As soon as the natives learn the difference between the genuine and the spurious article and the advantage of the former they will turn to the better one. This is somewhat indicated in the sale of tobacco and cigarettes, which has been less in China than had been hoped for. The article now offered by the Japanese is far inferior to that sold by the American concern, and while the price for the monopoly tobacco is low, it has failed to drive out the American product.

Marking the American trade-mark with Chinese characters appears to be absolutely essential to the proper identification of the American product, even when offered in the Japanese market, and especially when intended for the Chinese market.

TRADE METHODS.

REMARKABLE PROGRESS IN SPITE OF MANY OBSTACLES.

In the following pages Special Agent Crist deals with the larger problems of Japanese commerce. He says the bulk of the Empire's business is done by means of brokers and agents. Sample rooms play a most important part in the importing lines. The study of these will repay merchants and manufacturers seeking an entrance into oriental markets. Many American practices referred to by Mr. Crist are embarrassing in the extreme. If the situation is such as he says it is, condemnation of the methods referred to is well merited. English and German ways of working up and securing trade in the East are referred to and commented on favorably. Mr. Crist writes:

The great bulk of the import trade of Japan is done through the medium of agents or brokers who have been long established here and

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who act for the jobber and wholesale merchant or the manufacturer who uses foreign materials in his plant. The native merchant in preparing to lay in his supply of foreign-made goods comes to the broker's sample room and there examines the great variety of samples with which every broker and commission house is well supplied by the manufacturers whom he represents. From these samples orders for the next season's stock are made up. Upon arrival of the shipment, delivery is generally at once taken by the merchant, thereby completing the transaction. It is not absolutely certain, however, that delivery will take place. The fact that there are failures to dispose of shipments with promptness is abundantly established by a visit to almost any godown, or warehouse, of which each broker owns one or more of smaller or larger capacity, in accordance with the volume of his business.

If the market be up beyond the expectations of the merchant, he may possibly decline to accept the goods. It seldom happens, however, that a shipment is left indefinitely on the agent's hands, although that does occasionally occur. Some concession will doubtless be made whereby the conditions are made easier and more to the liking of the merchant. It may be necessary, however, to hold the shipment until the market is more propitious, or even to sell to some other merchant who may desire to purchase such goods.

COMPROMISE THE RULE.

It is often deemed better to compromise the terms of the contract and effect a sale than to have recourse to the courts to enforce the contract as originally made. Going to court takes too much time, money, and loss of prestige to be desirable. In order to obviate such contingencies and to develop sound business relations for themselves and their principals, the commission agents make close study of the market conditions at home as well as in Japan, and acquaint themselves with the members of firms for whom they buy. By these and many other methods they familiarize themselves with the financial standing of their principals and with the many points which are essential to successful business relations.

Every commission house and broker has in addition to the sample room some place where his patrons can come in and take tea and talk shop. Through the medium of these talks he keeps himself in touch with the retail market on all lines which his patron handles, not only what he has sold him but what he has bought from some one else. He can tell whether the last pattern or style of a certain line of goods is selling well, whether it is in order to suggest some change or modification. On the other hand, a change or alteration is often suggested by the native. The live broker finds out all these points and at once notifies his home office or the manufacturer of the particular line affected.

ENGLISH AND GERMANS WISE.

The English and German manufacturers pay heed to these pointers and in the shortest possible time send out great varieties of such samples for inspection. Should these meet with approval, it frequently happens that a specimen output of two or three bolts in the case of textiles may then be sent to ascertain whether the pattern in its entirety meets the desires as fully as anticipated, thereby offering a further

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opportunity for examination and criticism. The Germans and English go further than this in many lines, such as printing and calendering presses, metal-working machines, lathes, milling and drilling machines, and machines of like kinds. In these lines they are repeatedly requesting their brokers or representatives to accept numbers of machines to be sold on consignment. This is never done by American manufacturers. When it is known that an American color-type press, which would be quoted at $3,500 net under terms of cash, and a similar press made in Germany is quoted at $1,800, with discounts for cash of 15 per cent or a credit of two, four, or even six months, it is easy to see that Germany and England are doing what America has not yet done. They are leaving no stone unturned to sell their products, and those products have been made exclusively for export. In the matter of printing presses and the further disadvantage to which Americans are placed, it might be stated here that it has been said that the duty on printing presses from England, Germany, or France is 5 per cent, while on those from America it is 10 per cent. The source of this information is the 1905 edition of customs regulations, I am informed. I have been unable to ascertain the cause of this seeming discrimination.

METHODS OF SMALL CAPITALISTS.

The Japanese of small capital is entering business on a scale somewhat out of proportion to his finances, and he does not always feel able to invest a greater sum to obtain a plant that would last him for a longer period, when he can, with a smaller outlay, equip his establishment at a lesser cost with machinery which will serve him well but for a correspondingly short, or even much shorter, time. That a cheaply equipped factory will require more attention and repairs than one of higher grade does not yet appeal to him. Labor is very cheap in Japan; the laborer's time is therefore not so valuable that delays count very seriously in the profit and loss side of the ledger. The conditions here are such that the ambitious Japanese realizes the good business opportunities that exist, and is anxious to install without delay whatever equipment his business may require and his limited capital will admit, relying on the future (which is ever bright to the optimistic Japanese), and to his thrift and economy to bring success. The commercial progress of the entire nation is a testimonial to his faith in himself as well as to his frugality, and an evidence of the fact that his optimism has not been misplaced.

LITHOGRAPHING AND COLORTYPE PRESSES.

Rapid lithographic presses are having a great amount of work in Japan at the present time, and the future promises even more. I am told that the Japanese are now building lithographing and colortype presses, and that within the next five years their perfection may be looked for. Calendering presses also have a market, but the price for a German-made press at $4,000, which is about as cheap as they have been sold here, does not admit of their very great sale.

In orders of this character, competition is not apt to figure, but the best prices obtainable from those concerns whose general average of prices is known are considered satisfactory. Business of this character forms quite a good percentage of the general business, and the

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houses profiting on these occasions are those whose terms are easiest and best. Here again it is quite evident that our American exporter does not come in very strongly.

EMBARRASSING AMERICAN PRACTICES.

There are some practices followed by American concerns which cause great embarrassment to importers who have endeavored to build up an American trade. Several instances have been cited by commission houses who have English and German as well as American connections. The following will serve to illustrate: An immense business has been done by importers in heavy machinery of all descriptions during the past year, and Americans have participated to a most flattering degree. One concern, which has the sole agency in Japan for an American machine-manufacturing house, has obtained the trade-mark registration for this country, and is legally protected from infringement upon the part of any other person in handling these articles. The American manufacturer, intending to be alive to business, answered a request for quotations received from another broker in the same city where his agent was established. As a result of this correspondence, the new broker placed an order with the manufacturer, who stated that he had no sole agent representing him. This is doubtless his understanding of his relation with his agent. Upon the arrival of the shipment the matter at once came to the attention of the original broker, who served notice upon the new broker that he had a sole agency and he would prosecute any person taking delivery of the goods.

Such transactions as this do not tend to develop a friendly feeling for American methods or manufactures. All parties concerned are more or less damaged—the persons for whom the commodities are purchased, the middleman in both cases, and the manufacturer as well. It also evidences an ignorance in America of the most approved methods of building up a solid and lasting market.

If a German or an English concern receives a request for prices on the commodities which they manufacture, they at once refer the inquiry to their agent on the ground, who transacts the business to the satisfaction of all concerned.

Americans have the reputation of being ready at the first opportunity to cut out the broker and do business direct. This greatly deters established commission and brokerage houses from building up a market for American exporters. Such practice almost invariably results in losses, and in many instances to an abandonment of the market by the American, or a changing to some other field by the Japanese. Misunderstandings are bound to arise which should be settled at once because of market conditions, but which can only be settled by the presence of some one familiar with both markets. Time, and in all probability the size of the business, will not admit of sending a person from America to adjust matters; thus the business is diverted by the difficulties presented, and the current goes along the channel of least resistance to some other country.

CATALOGUES AND CONTRACTS.

German catalogues come to Japan printed in English, the commercial language. English and German manufacturers do not hold themselves hard and fast to their wholesale-catalogue prices, but frequently

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make discounts therefrom and extend credits in addition. This deserves careful consideration by our manufacturers.

Much of the foreign trade is done on indents or contracts for definite quantities with specifications as to details of style, quality, size, etc. It is generally left to the agent to select the goods in whatever field he may elect, although at times limitations as to country are made, and in certain instances the firms from whom bids are to be asked have been stipulated, thus further limiting the field of competition. Those commission houses doing the largest amount of general importing have either branches or agents in New York as well as London and transact their business where the prices and conditions are most favorable. (Prices on continental goods are generally obtained through London.) There are several American commission houses established in the trade of the Orient who have their head offices in New York and maintain branches in London.

EFFECT OF PRICES.

When orders are given or specifications presented requiring certain foreign goods, communication is at once had with New York and London by mail or cable giving full descriptions. New York and London prices are received and compared, and from these quotations bids are submitted by the commission agent to his principal in this market. All other things being equal the lowest price is the governing factor in the equation. From this it can be seen that through these American agents American manufacturers have as good opportunities for selling their goods in this market as those of any other country with which these commission agents are dealing. Many of these American agents have their branches in Yokohama, Kobé, Shanghai, Hongkong, Tientsin, Niuchwang, and other ports in the Orient, and thus cover a broad field, coming in touch closely with all branches and phases of the business and all classes of imports.

The method of procedure above referred to to obtain prices prevails generally with commission agents of all nationalities represented here where large business is done, and it is usual in the case of orders involving large amounts to request tenders from all available sources, thereby bringing about a world-wide competition. If, however, the question of time is one of importance American manufacturers successfully compete with all of the nations of the world. How strong an influence the matter of time has been in the past year may be shown by the fact that during the first seven months of 1905 there was imported from the United States through the port of Kobé alone over 41,250,000 yen as compared with 15,250,000 yen for the corresponding period of 1904; while from England the values of imports for these respective periods were in round numbers 31,500,000 yen and 15,500,000 yen, American commodities having outstripped English imports by nearly 10,000,000 yen or by about $5,000,000. There is no other country that equals the American record during that time save British India, which exported nearly 50,500,000 yen in value, over 80 per cent of which was Indian cotton.

OPPORTUNITIES FOR AMERICAN GOODS.

There are great opportunities in this market for American manufacturers to maintain the lead if they will send their representatives to

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this country and have them on the ground to act either as sole representatives or in conjunction with the commission agents. In this way the manufacturers can be kept advised of modifications and changes in the character of the market requirements. This is being done to a limited degree by some American concerns, and with most flattering success. In every instance of this kind that I have observed the returns to the manufacturer have proven the wisdom of the undertaking and resulted in largely increased sales. Americans and American manufactures are in high favor with the Japanese, and in view of this the present strong hold on this market should not be relaxed, when with but comparatively slight effort, expense, and attention the volume of business can not only be maintained but materially increased.

As I have before stated, the question of price ordinarily governs, and where the right kind of goods can be obtained at the best prices is the place the importer will do the most business, and every commission broker strives to do as much business as is consistent with safety to himself and satisfaction to his principal. Catalogues and correspondence alone accomplish but little.

EFFECT OF DISTANCE.

The distance from America is too great to admit of sufficient information being obtained by this method to be available in a market where others have direct personal information. And on the other hand catalogues without prices are absolutely worthless. Many manufactures are sold on such margins that quotation of prices is prohibited by the natural fluctuations in the market values of their component parts. Many commodities which to the uninitiated appear prohibitive in their price can be sold here if one who is acquainted with the many phases of their utilities should come to this market and acquaint their users with the advantages possessed over similar commodities now in use.

EVERYTHING EASY TO EXPERTS.

Much may be accomplished by intending exporters in acquainting New York agencies of importing houses in the East with the lines which they have for export and requesting notification of contracts to be filled in these lines. In transactions made through these channels the agent pays the manufacturer for the goods and directs him as to shipment. By these means American exports are brought to this market without the expense incident to maintaining special representatives in this country, and a substantial export business can be built up.

CERTAIN UNPLEASANT FEATURES.

This method has its unpleasant features unless careful attention is given by the manufacturer to the shipments. Not infrequently delays occur in shipping, or in shipping by undesirable routes, or inefficient packing results in losses, en route, through damaged goods. When claims are presented to the American agent because of damaged consignment he refers it to the manufacturer, who produces evidence that the shipment left him in good condition. The agent in turn reports to his principal, who in the meantime has doubtless appealed to the steamship company and landing agent, who states that when delivery was taken their responsibility ended. The commission broker bears

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the loss, and in all likelihood turns to England for the next order of like goods, where conditions are such as to reduce to a minimum the occurrence of such embarrassing situations. In England the manufacturer is his own shipping agent, and attends to his export business through the well-organized export department of his establishment in Manchester, where factories and docks are adjacent to each other. In America the export agent may be 500 or 1,000 or more miles from the manufacturer, and, unless agent and manufacturer work in harmony in regard to details, difficulty will be found in bringing about satisfactory results; while, on the other hand, attention to details will undoubtedly result in highly satisfactory increase in sales.

IMPORTS AND EXPORTS.

GENERAL TRADE STIMULATED BY THE WAR.

Consul-General Miller, of Yokohama, reports Japan's trade for the first six months of the present year. It indicates a remarkable capacity for devising and carrying forward modern trade methods. A steady and wonderful increase in foreign commerce is recorded. The United States leads all countries both in imports and exports. All the values are given in gold. Consul Miller writes:

Japan's imports for the six months ending June 30, 1905, were $142,658,505 gold, the greatest in Japan's history. How much war material is represented in this I have been unable to ascertain. It does not include the direct purchases of the Government, but undoubtedly a large amount of the imports are due to necessary war measures. The very unusual amount of imports for the six months given was due largely to the desire of importers to escape the increased tax levied after June 30, combined with requirements for war purposes. The greater amount of Government purchases has been through local firms, foreign and native, and I am advised that most of these are included in the import figures, although all are not.

The total exports for the six months ending June 30, 1905, were larger than ever before, amounting to $71,098,440. In the matter of exports the shipments to Korea and Manchuria by army and navy transports are not included in the figures of this report; hence there is no showing of the supplies sent to the army and navy, although the report includes imports for that purpose, and this, to some extent, seems as an explanation of great excess of imports over exports, amounting to $71,560,064. There is, however, a steady and wonderful increase in the foreign trade of Japan with a constant enlargement of both exports and imports. The increase for the past ten years is practically 300 per cent. As both exports and imports for the past six months show such a large increase it seems quite clear that the war has stimulated them and has resulted in a substantial development of Japanese industries.

Exports for the six months ending June 30, 1900, were 95,053,057 yen and the imports 163,435,615 yen,[a] equivalent to $128,727,370 gold. For the six months ending June 30, 1904, the exports were 137,465,703 yen and the imports 182,634,872 yen, making the total value of the

[a] Yen=$0.498.

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commerce for the year 320,100,575 yen, equivalent to $159,410,086 gold. For the six months ending June 30, 1905, the total exports and imports were $213,757,066 gold.

STANDING OF DIFFERENT COUNTRIES.

The United States leads all countries both in imports and exports. For the six months under consideration the value of imports from and exports to the United States was as follows:

Imports	$6,924,704
Exports	3,675,607
Total	10,600,311

China comes next to the United States in volume of trade. The values (gold) were:

Exports	$3,843,404
Imports	2,827,378
Total	6,670,782

Inasmuch as a very large percentage of the goods shipped to Hongkong is destined for China, the foregoing figures do not show the entire trade between China and Japan.

The figures in the annexed tables represent gold, and show exports to and imports from Hongkong:

Exports	$678,101
Imports	48,523
Total	726,624

The commerce with Great Britain is shown in the annexed table:

Exports	$452,437
Imports	4,792,952
Total	5,245,389

British India sends Japan $3,021,528 in merchandise, and receives from that country $358,956.

Commerce with Germany is shown in the following figures:

Exports	$146,627
Imports	1,887,858
Total	2,034,585

Japan exported to Korea $1,050,452, and imported $340,130.

France and Belgium each fall below $1,000,000 in the total of exports to and imports from. To France Japan exported $616,823 and imported from that country $264,011.

The exports to Belgium were valued at $17,800 and the imports from that country at $711,124.

TRADE WITH THE UNITED STATES.

The exports to the United States are greater than ever before for the same period, and the imports thence are more than double. The increased exports are mats and mattings, silk tissues, habutae, and raw silk. In all of these articles the exports exceeded those of any corresponding period, while in straw braid and tea the exports were less than previous years.

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In imports from the United States there was a notable incease in the following articles, the values stated being gold: Raw cotton, $11,774,464, or more than double that of any similar period since 1900. Machinery and engines reached the unprecedented value of $3,262,831; locomotive engines, $387,032. Iron, bar and rod, shows a most satisfactory increase, $155,873; iron rails, $187,484; nails, $265,981; iron pipes and tubes, $174,948; iron and steel, $646,017. This is the greatest amount of iron and steel ever shipped from the United States to Japan for a like period, and shows a splendid growth in that line.

Leather imports from the United States reached the enormous value of $3,223,219. Flour also reached its greatest volume, $2,806,620, and kerosene $2,923,927; oil cake, $60,473, and paper, $84,743. The importation of oil cake from the United States seems to be a new venture. The enormous imports of flour and leather are doubtless due to the war demands and the increase in imports of iron, steel, engines, machinery, etc., have also been caused by the war requirement. It is clear, however, that in all these lines and many more there is a strong growing demand for the products which the United States is in a position to supply.

VARIOUS ACTIVITIES.

Consul Harris, of Nagasaki, reports the movement of trade in his consular district during the first six months of 1905. He writes:

During the first six months of 1905 there has been a great increase of imports in this district, as compared with the corresponding period of 1904. While that period also showed a large increase, it was almost wholly due to the large importations of coal for the Japanese navy; but this year, while the coal shipments received are still very heavy, there has been an even greater increase in the general imports, caused in part by the desire of importers to bring in their goods before the operation of the new war tariff, which came into effect on July 1, 1905. Exports and imports together for the whole consular district amounted in value to $19,040,512, or $3,750,039 more than in the first six months of 1904. The imports amounted to $12,512,593, an increase of $3,526,377.

While the exports, amounting to $6,527,919, have failed to keep pace with the imports, it is worthy of note that they have at least not diminished, in spite of the fact that so much of the national energy was expended on unproductive enterprises, showing instead a slight gain, $223,662.

COAL SUPPLY AND CONSUMPTION.

The demands on the coal supply of this district have been increasingly heavy during the war, resulting in the last few months in something of a shortage and a considerable rise in prices. The army transport service has been using great quantities of coal, and the large manufacturing regions of the country have also been requiring more than usual. At the same time the coal companies have been badly hampered by the loss of many of their best men who have been called out for military service, and by the requisition of large numbers of coal barges and schooners for the transport of army supplies. Coal that brought $3.50 a ton before the war brought $4 a year later, while during the last few months the price has risen to $5.50, and bids fair to rise still further.

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There has been fair activity in shipping, the number of vessels in foreign trade entered and cleared being 1,345 more than in the corresponding period of 1904, and the increase in tonnage amounting to 962,570 net. The total number of entries and clearances was 5,768 vessels, aggregating 6,342,205 tons net register, this being slightly more than in the first six months of the year before the war.

The increase in the Empire's imports was due very largely to imports of kerosene oil (11,000,000 gallons against 7,000,000 gallons), submarine cables, rice, twice as much as in the same six months of 1904. There was a falling off in iron and steel imports from 490,440 to 390,909 tons. Great Britain supplied about 60 per cent of the total imports, being a large increase over 1904. Steamers, steam engines, boilers, machinery of all kinds, and cotton goods were among the imports. The United States came next to the United Kingdom, followed by China.

BANK DEPOSITS.

The bank return issued by the finance department of Japan shows that at the end of December last the aggregate amount of deposits in the banks were 854,846,079 yen and advances outstanding 1,125,640,024 yen. The total amount of bank deposits and advances of the six principal cities at the end of June last stood as follows:

City.	Deposits.	Advances.
	Yen.	*Yen.*
Tokyo	187,232,048	190,232,614
Kyoto	25,956,762	18,218,741
Osaka	92,345,871	88,979,605
Yokohama	22,916,709	29,100,013
Kobé	23,038,444	25,378,402
Nagoya	22,009,961	21,358,698

COASTING TRADE.

According to a Japanese clipping forwarded by Mr. Crist, special agent, the signing of the treaty that brought the war between Russia and Japan to a close led some newspapers in the Far East to discuss certain phases of the problem of Korea, especially the right of Japan to a free participation in the coasting and river trade of the peninsula. On this subject the Kokumin says:

"The total coast line of Korea is some 1,700 miles, and although the eastern coast of Korea does not possess good harbors, its western and southern coasts, especially the latter, do; some of these are deep and well sheltered. As these harbors and inland rivers have been thrown open to Japan, that country will be quite free to obtain whatever gain navigation may bring, and the Koreans themselves will profit greatly by the development of the country's resources."

Writing on the same subject, the Nichi-Nichi says that "the provisions of the treaty are satisfactory on the whole, and the treaty will have the effect of giving room for employment of the Japanese mercantile fleet, which has been considerably increased on account of the war, and will aid at the same time in the development of Korea's resources."

"Politically, Korea is now under the protection of Japan, and its commerce and industries are also practically under the control of the Japanese. The Japanese Government still deals with Korea as if it were an independent country."

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KOREA.

TONNAGE CHARGES.

COAST AND INLAND WATERS OF KOREA.

The Department of State has forwarded the following important dispatches for publication: One from the American ambassador at Paris advising the Department that the Suez Canal Company notifies the American embassy that after January 1, 1906, the transit duty will be 7.75 francs per ton instead of 8.25 francs, and that the maximum draft authorized for ships passing through the canal will be 8 meters 23 centimeters, that is, 27 English feet, instead of 8 meters, or 26 feet 3 inches.

Another, forwarded by both the American minister to Japan and by the American minister to Korea, concerns coast shipping of Korea by Japanese ships. It reads as follows:

ARTICLE I. Japanese vessels are, subject to the provisions of the present agreement, allowed to navigate Korean coast and inland waters for trading purposes. This article, however, does not apply to the navigation between the open ports.

ART. II. When a Japanese vessel desires to navigate Korean coast and inland waters the name and residence of the shipowner, the name, class, and capacity of the vessel, and the zone of navigation of the vessel shall be reported to the Korean customs through a Japanese consul, and a license shall be obtained. This license is available for one year from the date of issue.

ART. III. The Japanese vessel shall pay the following scale of fees to the Korean customs every time she obtains a license:

	Yen.
European-styled vessel of 100 tons or less	15.00
Japanese-styled vessel	15.00
European-styled vessel of between 100 and 500 tons	50.00
European-styled vessel of between 500 and 1,000 tons	100.00
European-styled vessel of 1,000 tons or more	150.00

ART. IV. Japanese vessels may freely navigate within their zones of navigation. They are, however, not allowed to call at places outside Korean territory except in case of natural disaster or accident, or unless by special permission of the Korean customs.

ART. V. The Japanese vessel shall always carry her license during navigation in order that it may be exhibited on demand by the Korean customs, local officers, or a *tong* or village headman authorized by the local officers.

ART. VI. Japanese shipowners may lease ground for building warehouses at the mooring places. Also they may construct wharves on the coast by permission of the Korean customs.

ART. VII. If a Japanese vessel violates this agreement the Korean customs will investigate the facts and if the violation be grave in nature may demand the return of the license or may refuse to renew it.

ART. VIII. If a Japanese vessel or her crew violates this agreement or the provisions of the other treaties and conventions, or if the latter commits a crime, the Japanese consul shall punish the vessel or her crew according to the treaties and Japanese law.

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ART. IX. This agreement shall remain in force for fifteen years from the date of signature, and may be renewed by negotiation on the expiration of the period.

In case, however, that the Korean navigation industries are improved in the future, the two Governments may make another agreement by mutual consent even within the said period.

CHINA.

CONSUMPTION OF FLOUR.

SUPERIORITY OF UNITED STATES BRANDS—AUSTRALIA EXPECTS TO GAIN BY THE BOYCOTT—MANCHURIA AS A COMPETITOR.

Special Agent Burrill furnishes a report on the consumption of flour in China which is especially interesting at this time, in view of efforts made to prevent importation of that commodity by means of the boycott. Australian dealers expect to receive permanent advantage from the boycott, but what will most interest United States exporters is the probability that in the near future Manchuria will supply a fair proportion of the flour required by China. Mr. Burrill's letter is dated at Shanghai, September 1, and follows:

Shanghai is the distributing point for northern China, and into this port there was imported from the United States in 1904 commodities at a customs valuation of 25,986,201 Haikwan taels, of which there were 91,728 piculs of flour, valued at 343,980 Haikwan taels. Figuring the arbitrary customs rate of 1.38 Haikwan taels to $1 gold, as established for the month of September, the total importations amounted to $18,830,580, and the 91,728 piculs of flour, equal to 45,864,000 pounds, were worth $249,261 in American money. Of this, 1,244 piculs, valued at 4,664 Haikwan taels, were reexported to foreign countries and Hongkong, and 56,809 piculs, valued at 213,036 Haikwan taels, were reexported to Chinese ports, leaving the total net imports 33,851 piculs, valued at 126,939 Haikwan taels. It is estimated that northern China consumes about one-sixth of the flour imported into the Empire, although by reason of the system, or lack of system prevailing here, it is impossible to obtain accurate figures.

MOVE FAVORABLE TO AUSTRALIA.

In 1904 practically every pound of flour imported into China came from the United States, but there is now a movement on foot by which the Australian product is to be introduced, and rigorous efforts are to be made to increase the demand and maintain the supply. A commercial agent, under the direction of the Australian government, visited Shanghai about six months ago for the purpose of investigating trade conditions and reported that, although the United States controlled the market in China, there was an opening for Australian flour which, if properly worked, might be developed into a paying business.

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This report, it is said here on reliable authority, will lead to the invasion of the northern China market by the Australian flour manufacturers at an early date, but it remains to be demonstrated whether they can successfully compete with the American brands already firmly established and popular with the consumer. The opening of Manchuria will, however, unquestionably have an important bearing on the flour trade in northern China, and manufacturers may be confronted with a disagreeable situation in the not distant future.

WHEAT AND FLOUR IN MANCHURIA.

It is known that wheat can be grown in Manchuria comparing favorably with the best quality raised in the United States, and this, it is maintained, will lead to the erection and operation of flour mills which will be able to supply a good grade of flour at prices far below those at which the American flour can be sold. Not only will the cost of production be less, but the freight and insurance charges will be extremely low as compared with rates from the Pacific coast, and the cost of labor may be estimated at approximately 25 cents (Mexican) a day. With these advantages, the grinding of Manchurian wheat into flour by mills owned wholly or in part by the Chinese is merely a question of opportunity and capital, and that eventually the flour made in Chinese mills of Chinese wheat will control the market of northern China appears to be equally as well assured.

The outlook, therefore, for the continued control by the United States of the flour market of northern China is not especially bright, while the promised venture of the Australians into this field of commercial activity seems predestined to failure. The price of an article of food is the first consideration of the Chinaman, although the day has passed when the manufacturer catering to this market can afford to disregard the quality of his product. The competition is now keen and will grow stronger with the opening up and development of Manchuria, so that American flour producers will be compelled in time to meet the lower prices or abandon this field to the Chinese. Of course here is now and will be in the future a strong demand for high-grade American flour, but this is confined almost exclusively to a small percentage of the 10,000 foreigners in Shanghai and a few in the outports.

THE MOST POPULAR BRANDS.

The most popular American flour on the market is a second grade flour put up in 50-pound cotton sacks. There is a strong demand for this, under normal conditions by the Chinese. If this flour is intended for transshipment to the interior, two sacks are packed by the shipper on the Pacific coast in a gunny sack which costs about 5 cents (gold) each. These gunny sacks are disposed of here for 4 to 5 cents (Mexican), depending on the condition in which they arrive. The method of packing is apparently satisfactory to the importer and the consumer, and as the native buyers have grown accustomed to the 50-pound sack, their insistence on a smaller package has gradually disappeared, and now the Chinese millers are imitating the American method of putting up flour in size, shape, and weight. While the natives know nothing of baking, they are fond of cakes and confectionery, and their flour is consequently largely bought of the bakers or restaurant keepers in

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the finished product. In this way there is a constantly growing demand among the Chinese consumers, especially where the rice crop is small with correspondingly high prices.

COMPARISON OF PRICES.

As a basis of comparison the prices of flour delivered from Shanghai godowns (warehouses) for August 7, 1904, and for August 29, 1905, are herewith given. The names of the brands will indicate to the American shipper the flours in this market which are subject to daily quotations. The prices stated are Mexican for bags of 50 pounds.

Brand.	Aug. 7, 1904.	Aug. 29, 1905.	Brand.	Aug. 7, 1904.	Aug. 29, 1905.
White Lilly	$2.38	.....	Dragon	.....	$2.38
Blue Stem	2.50	$2.53	Bicycle (Chinese)	$2.14	2.39
Gold and Silver (new brand)	.....	2.19	Three Horses' Heads	2.17	.....
Bell	2.18	.....	Sperry 3 X	2.80	.....
Gold Dragon	2.40	.....	Sperry Pioneer	2.60	.....
Star	2.45	2.50	Sperry Anchor	2.80	.....

The price of the "Bicycle" flour, it will be seen, has been increased to $2.39 (Mexican), an advance of 25 cents (Mexican) on a bag over August, 1904. This is due undoubtedly to the boycott of American goods, the Chinese owners of the Fou Foong mill, manufacturing this brand, quickly seizing the business advantage thus presented. With practically no American flour bought or sold by the Chinese since the institution of the boycott, the shrewd native manufacturers stepped in to supply the demand, working their mills double time, and incidentally profiting by the so-called patriotic protests of their countryman against the United States by "boosting" the price of a food staple to the consumer.

MILLS IN SHANGHAI.

In Shanghai alone there are six companies operating flour mills, and as two of these own double mills, there are in reality eight in active operation. The erection of a ninth mill has just been completed, and the machinery, which is in part American and part English, is now being installed. This mill, it is reported, will begin work in the near future, and its output, it is estimated, will amount to 700 barrels a day. Of these eight mills, all are owned by the Chinese, with the exception of the China flour mill, which is controlled by both foreign and native capital. In every instance, however, the mills are operated under foreign supervision. The machinery of the Fou Foong (a double mill) is entirely of American make, while the other double mill has half American and half English machinery. All the other mills, with one exception, are equipped with English machinery.

The combined output of the eight mills is 3,000 barrels a day, and of this quantity approximately 1,800 barrels a day are turned out by those mills using American machinery. Chinese labor is employed exclusively, and while to operate a mill practically four times as many employees are required as would be found in any mill of similar capacity in the United States, the difference in the wages paid to workmen in the two countries greatly decreases the cost of production here. It is impossible to obtain an accurate statement, even from the chief miller,

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regarding the number of persons employed in any one mill, for the Chinese managers are disposed to regard this information as a trade secret. Steam power is used, the fuel is Japanese coal, and the mills, because of the boycott of American goods, are working two shifts.

SOURCE OF SUPPLY AND OUTPUT.

Most of the wheat used is brought from Wusih, near Soochow, from Yangchow, and from Kiangyin, all within 150 miles of Shanghai. It is transported in native boats having a capacity of from 300 to 400 bushels each. The wheat is in an extremely dirty condition when delivered, being mixed with small lumps of clay, mud, and stones. This is a part of the great national system of "squeeze," to which I shall refer later, the foreign matter increasing the weight of the grain, thereby insuring an additional though small profit on each transaction. Suffice it to say that when cleaned at the mill a loss of approximately 10 per cent is shown on the deal. The average price of wheat delivered to the mill is $1.20 a bushel, but it is subject to fluctuations.

The flour manufactured by these mills is not of a high grade. Although it has a white appearance and looks strong, the wheat is comparatively free from gluten and the result is a weak product. That the demand for locally made flour is exceptionally good is shown by the number of new mills erected within so short a period. The first flour mill was built here about ten years ago, and all are apparently paying good dividends on the investment. The Chinese managers declare that their success is attributable to the fact that the flour produced is much drier than the American flour and is preferred on that account. They also maintain that at Niuchwang the local product found a good market at a price in advance of that paid for American flour, but that statement requires corroboration. The flour of the Chinese mills is packed in 50-pound cotton sacks similar to those used by the American producer, and the price varies from week to week, according to the market. The average price, however, may be placed at $2.37 (Mexican) per sack of 50 pounds at the mill. With few exceptions, the entire output is purchased by the Chinese, some of them contracting several months ahead for specified quantities.

PRIMITIVE METHODS.

Outside of Shanghai there are three flour mills owned and operated by the Chinese. These are located at Hankau, Wuhu, and Ningpo. It is impossible to obtain even an approximate estimate of their output from this point. In the interior the Chinese have a crude but cheap and popular method of making their own flour by grinding the wheat between two circular blocks of granite, the upper one being attached to a bullock which circles around with unwearied patience and perseverance until the result is accomplished.

DEALERS IN AMERICAN GOODS.

Special Agent Burrill also furnishes a list of American houses established at Shanghai that make a specialty of handling merchandise from the United States, and a list of foreign houses that handle some Amer-

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ican goods. The special lines that are handled by these firms are mentioned.

The following list of the principal American houses doing business in Shanghai, together with the names of English and other European firms which handle to a greater or less extent goods produced in the United States, may be of interest to American manufacturers directly or indirectly engaged in the export trade. These firms practically control the import and export business of northern China, for which Shanghai is the distributing center, and their commercial integrity and trustworthiness are highly regarded both by the foreign and native population of this part of China. They handle an enormous volume of business annually, and as their success or failure depends absolutely on the fairness and justice of their transactions with the Chinese, it is safe to assume that the above estimate of their reliability is correct.

AMERICAN FIRMS ESTABLISHED IN SHANGHAI.

General merchandise.—American Trading Company; Andrews & George; China and Japan Trading Company (Limited); Fobes & Co.; Fraser & Co.; Mustard & Co.; New York Export and Import Company; Wisner & Co.

Provisions.—Getz Bros. & Co.; Libby, McNeill & Libby; Swift & Co.

Shoes.—American Shoe Company.

Sewing machines.—Singer Manufacturing Company.

Piece goods.—China and Japan Export Company.

Flour.—M. J. Connell.

Retail grocers and general stores.—Dunning & Co.

Tea exporters.—George H. Macy & Co.

Manufacturing pharmacists.—Frederick Stearns & Co.

Petroleum, lubricants, etc.—Vacuum Oil Company.

Lumber and machinery.—J. C. Epperly & Co.

Printers, bookbinders, and stationery.—Methodist Publishing House.

Kerosene oil.—Standard Oil Company.

Electric belts.—Doctor McLaughlin Vigor Company.

ENGLISH AND CONTINENTAL FIRMS.

The following English and continental firms do some business in American lines:

Agents American steamship lines.—Dodwell & Co.; Fearon, Daniel & Co.; Nippon Yusen Kaisha—Shewan, Tomes & Co.

Piece goods.—Jardine Matheson & Co.; A. G. Kidston & Co.; Locksmith Company; Reiss & Co.

Lumber.—Shanghai-Hongkong Building and Investment Company; Snethlage & Co.; Whay-Ching Kee Lumber Company.

Tobacco.—American Cigarette Company; Arnhold Karberg & Co.

Typewriters.—T. L. Bickerton & Co.; Dodwell & Co.; A. Newbourg & Co.

Builders' supplies.—Shanghai-Hongkong Building and Investment Company.

Furniture.—R. Lawrie Smith & Co.

Drugs.—P. O'Brien Twigg.

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Flour.—James Jones & Co.
Shoes.—Hall & Holtz.
Kodaks and photographic supplies.—Eastern Trading Company; Mactavish & Lehmann.
Musical instruments.—Moutrie & Co.; Robinson Piano Company.
Roofing.—Eastern Trading Company.
Graphophones and novelties.—A. Newbourg & Co.
Hardware, steel, and rubber.—Thomas Bros.
Motor engines and launches.—Thoresen & Co.

HORSES FOR SHIPMENT.

ENCOURAGEMENT FOR AMERICAN BREEDERS.

In response to inquiries of persons in the United States interested in breeding horses for shipment to foreign countries, and in establishing a line of steamships to carry fresh meat by cold storage to the Orient, Special Agent Burrill was instructed to make inquiries in regard to these matters. It seems there are comparatively few draft animals other than those raised in China, and that nearly all imported animals are brought from Australia. Mr. Burrill describes existing conditions, and is inclined to the belief that there is a fair field in China for the introduction of American horses and mules. His letter on this subject follows:

That there are no American horses in northern China is probably due to the fact that no determined effort has ever been made to introduce them, and the market, though limited, offers inducements of which the American exporter might profitably take advantage. Practically all the horses now in use in this part of China are imported from Australia, for no especial reason apparently other than that the Australians are keen traders, and with frequent consignments, in the absence of all competition, keep the market well supplied. While foreigners and the wealthier class of the Chinese are not dissatisfied with the horses now imported, it does not follow that they are so prejudiced in their favor that they would not welcome an opportunity to compare them with the American grown animal, and horse dealers here unhesitatingly express the belief that horses bred in the United States would not only stand the climate well, but would be only temporarily affected by the necessary change of feed.

KIND OF HORSES PREFERRED.

Australian horses are usually shipped on consignments averaging 25 head each, and are handled on arrival by the Shanghai Horse Bazaar Company (Limited). When in good condition the prices obtained at the first public sale range from $175 to $250 each, exceptionally fine animals, of course, commanding higher prices. The preference here is for riding horses 14 to 15 hands high and for driving horses 15 to 15.2 hands high. Fine, upstanding, showy horses are most in demand, and if hardy and properly acclimated bring exceptionally good prices and have a ready sale. Cross-country riding is very popular during the winter months, but is abandoned when the planting of crops begins in March. Driving, however, is indulged in the year round, the

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macadamized roads throughout the foreign settlement and extending far into the country about Shanghai, and which are kept in excellent condition, affording opportunities for recreation and enjoyment which are in sharp contrast to the narrow, unevenly paved roadways of the native city.

HORSES FROM AUSTRALIA.

Australian horses shipped from Sydney arrive in Shanghai in about three weeks' time, and although a part of the trip is made through the Tropics, they appear to stand the journey reasonably well. Temporary stalls, each of which accommodates one horse, are erected on board ship. Wooden bars are so arranged as to prevent the animal from leaving his quarters, and cleats or crosspieces are fastened to the deck of the ship that a foothold may be retained in the event of rough weather. The freight rate from Sydney to Shanghai is approximately $50 a head, which includes a return trip fare for the man in charge of the consignment. On their arrival here the horses are immediately taken to the sales stables and gradually accustomed to the Chinese feed of bran, barley, and rice straw. In a few weeks, the time depending on the condition of the horses, they are sold at public auction and the proceeds, after deducting expenses, are transmitted to the Australian owner.

In order that imported horses may become thoroughly acclimatized before the hard work of the winter begins, dealers prefer that they should arrive here in the summer months, and, as the seasons here correspond with those in the United States, it is suggested that the months of June and July would be the best time for shipment. A few Canadian horses have been imported both for riding and driving purposes and have invariably shown greater adaptability to climatic conditions than have the Australian horses. These horses, however, were not sent on consignment, but purchased direct for private use.

OPENING FOR AMERICAN HORSES.

There were 1,900 horses licensed in Shanghai in 1904, and probably 1,000 more would cover the whole number licensed in the Chinese Empire. These figures include the Chinese ponies, which greatly outnumber the Australian horses, and these two classes are the only animals used for riding and driving in Shanghai. The ponies are all raised in the Province of Mongolia and are hardy, wiry little animals, standing from 12 to 13.2 hands high. They pull a heavy victoria or brougham with as much ease apparently as the horse, and will keep going until they drop from exhaustion. They, however, would in no way compete in or interfere with the market for American horses if it were decided to make an effort to introduce them.

There are a few mules here which were imported from the United States which are used for heavy trucking, of which there is comparatively little in northern China. Cooly labor is utilized for this purpose. As he is the cheapest and most docile carrier of burdens, strong, and able to live on little, taking up little space, and requiring no comforts or attention beyond supervising his work, he is made use of for transporting goods which, outside of the Orient, would call for the services of strong truck animals. For these reasons practically no demand exists for horses or mules ordinarily used for hauling heavy loads.

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HINTS FOR SHIPPERS.

If an American shipper should desire to enter the field in competition with the Australian horses it would be necessary to arrange with a Shanghai dealer to receive and handle a consignment in the way that is now customary in this market. By communicating with the general manager of the Shanghai Horse Bazaar Company (Limited), such information as would be necessary for guidance in properly transporting the horses could be obtained and the commissions, incidental expenses, and terms of settlement explained. While the market is not a large one it is of sufficient size, in the judgment of those whose opinion may be relied on, to justify a trial with conditions favorable to the establishment of a paying industry.

FRESH MEAT FROM AMERICA.

CONDITIONS UNFAVORABLE FOR SHIPMENTS.

In regard to shipping fresh meats by the refrigerating process, Special Agent Burrill intimates that conditions are such with regard to animal food supply in China that it would not be profitable for Americans to engage in that trade. He writes:

The installation of refrigerating plants in steamships plying between the Pacific coast and Shanghai, for the sole purpose of exporting American meat products, would hardly be justified by conditions here as disclosed by careful investigation. Native cattle and sheep are so abundant, the pasturage so plentiful, labor so cheap, and the cost of transportation to the market so low that butchers are enabled to sell beef at wholesale for from 10 to 14 cents Mexican, mutton at from 12 to 18 cents Mexican, and veal from 18 to 20 cents Mexican a pound. In order to compete with these prices American beef would have to be laid down in Shanghai so as to sell at 5 to 7 cents gold a pound. At a price higher than this the demand would be extremely limited.

The Chinese consume no meat, or, to be more exact, nothing but pork now and then, and when it is understood that there are only 10,000 foreigners in Shanghai, of whom approximately 2,000 are Japanese, who are compelled to live as cheaply as possible, and another thousand or so of various nationalities, who are also obliged to count the pennies, the outlook for the establishment of an industry of this description is not particularly encouraging. Game of all kinds abounds in northern China, and, as it is as cheap as it is plentiful, it is extensively used as an article of food. Poultry is also abundant and correspondingly low in price.

COLD-STORAGE PLANTS NECESSARY.

In order to engage in the business in Shanghai it would be necessary to erect a cold-storage plant from which the refrigerated meats could be delivered to the consumers. Such plants have been established at Manila and Hongkong for the purpose of handling Australian meats and perishable products. During the winter season Australian refrigerated meat is sent to Shanghai monthly, but its use thus far has been restricted to the leading hotel of this city. The Australians are constantly reaching out for oriental trade, and have

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met with gratifying success, but the fact that they have made no effort to extend their market for refrigerated meats in northern China convinces the business men of this section that such goods can not be handled here at a profit.

It is, of course, barely possible that if refrigerating conveniences were installed in steamships operating between the Pacific coast and Shanghai, in which perishable goods of all kinds could be transported, meats might be sent over as a part of this cargo and disposed of at a very narrow margin of profit. The figuring is too close, however, for anyone but an expert in the business to intelligently and accurately discuss, and then only after an exhaustive study of existing conditions.

ELECTRICAL SUPPLIES.

PROFITABLE FIELD FOR AMERICAN ENTERPRISE—EXTENSIVE CONSTRUCTION PLANNED—CONDITIONS FULLY DESCRIBED.

An interesting report is furnished by Special Agent Burrill on opportunities existing in China for the introduction of electrical machinery and supplies of every description. This vast field seems to have been almost entirely overlooked by those engaged in this great industry. Mr. Burrill fully describes the little that has been done for China in introducing electricity, and furnishes detailed information that will enable capitalists seeking good investments, electrical engineers, and manufacturers of electrical supplies to realize that an unusual opportunity awaits them in China. Mr. Burrill's report is dated at Shanghai, September 12, and follows:

In discussing the demand for electrical installation and supplies in China it is probably unnecessary to say that at the present time its development and possibilities can not be covered in detail, but an outline of the opportunities already presented, the work accomplished, and the difficulties under which engineers and construction companies labor in obtaining their supplies and fulfilling their contracts may be useful in indicating to American electrical supply companies the desirability of investigating conditions with a view to placing experienced men here in charge of branch offices.

China has enjoyed less development along civil and electrical engi neering lines than any other country of its size and importance in the world and presents a field which has evidently appealed to German, British, and Japanese firms, for they are on the ground, although inefficiently represented and poorly equipped to handle a business which has offered and will continue to present great possibilities for our home engineers and manufacturers if they will attack the proposition with the same energy and business ability that characterize their operations and assure success in the United States.

INVITING FIELD NEGLECTED.

In Shanghai, under the title of electrical companies, there are only two firms (both British) in business, each carrying a stock and doing a class of work which in the United States would be called petty contracting. One handles as its chief source of income materials

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entirely foreign to electrical work, while the other has at its head a man who, with the assistance of native employees, installs wiring for lights and bells in the smaller private homes in Shanghai and does work on electric fans and annunciators. I am informed that throughout the Chinese Empire there is not a branch or agency of any of the large electrical supply companies of the United States, which tells the whole story. The customs duty of 5 per cent on machinery certainly can not be responsible for this condition, and it is only explainable by the assumption that the opportunities for electrical work in the Far East are not sufficiently well known or appreciated by our home companies.

There are three German firms in Shanghai handling electrical supplies as a side line, and only one of these has made any marked success in this particular field. This company orders supplies from its home manufacturers only when needed for actual work, carrying in stock less material for this line of business than would be kept on hand by the small contractor or dealer in the United States. Their business is general in its character, and in their establishment, in addition to the limited stock of electrical supplies, may be found arms and ammunition, agricultural and other machinery, piece goods, tobacco, cigars, and cigarettes. They also buy and sell goat and sheep skins and are, in fact, a general trading company, adopting electrical supplies as an incidental source of revenue. This description applies to the other German firms and is mentioned only to show how little attention is actually paid to a line in which exist great possibilities.

ELECTRICITY AT TIENTSIN.

Notwithstanding the disadvantages under which contractors labored, some creditable electrical work may be found in a few of the larger cities, of which a brief description may be of interest. The Tientsin Electric Light Company, installed at a comparatively recent date, is already, it is said, a profitable enterprise, and it is reported that a franchise for a trolley system has been granted, on which work is soon to be begun. The plant at Tientsin was installed by Arnhold Karberg & Co., of Shanghai, a German firm, and is up to date and regarded of sufficient capacity to meet any probable future demand. A description follows:

Buildings.—The buildings comprise an engine room 60 feet long by 30 feet wide, a boiler house 60 feet long by 37 feet wide, together with a suite of offices for the resident engineer and his assistants. The buildings are constructed of brick, and space has been provided for additional machinery. The chimney is of wrought iron, 4 feet in diameter and 85 feet high.

Machinery.—The generators are direct coupled to high-speed engines and consist of three sets. The smaller set is capable of developing 40 kilowatts at 550 revolutions, and the two large sets 80 kilowatts each at 400 revolutions per minute. Each set is capable of carrying an emergency load of 25 per cent excess for two hours without injury. The engines are provided with steam pressure gauges and forced lubrication, the latter being supplied by a pump driven from the engine shaft and supplied at a pressure of 15 pounds per square inch. A speed indicator also driven off the shaft indicates the revolutions.

Switch boards.—The main switch board is of white marble, inclosed in a polished wooden frame, supported by an iron framework. The

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panels, one for each dynamo, are provided with all the latest improvements, including switches, volt meters, ampere meters, and general gear. Each feeder or trunk line is supplied with a lightning arrester properly grounded. The engine room is spanned by a traveling crane capable of lifting 5 tons.

Pipe work.—The pipes connecting the boilers with the engines are of lap-welded mild steel, and the condensing and exhaust pipes are of cast iron.

Boilers.—The two boilers are of the water tube type (Babcock & Wilcox), each capable of evaporating 4,200 pounds of steam per hour at a pressure of 120 pounds per square inch. Each boiler is provided with a soot-cleaning apparatus, the tubes being cleaned by means of a steam jet. The boilers are capable of working up to full pressure in approximately thirty minutes. In the main flue to the chimney an economizer is provided for raising the temperature of the feed water by means of the waste gases, and the water thus reaches the boiler at a temperature of from 150° to 250°. This effects a saving in coal of from 15 to 20 per cent.

Feed pumps.—There are two duplex feed pumps (Tangyes), each capable of pumping 500 gallons an hour against a steam pressure of 160 pounds per square inch. These pumps draw their water from an overhead tank holding 1,000 gallons. Connected with the pumps is an appliance peculiarly necessary in China, known as a filter, and a water softener is also an absolutely essential feature in all steam construction work. The Tientsin plant is also provided with a surface condenser capable of condensing 7,000 pounds of steam per hour (Worthington Pump Company).

Lighting system and mains.—The 3-phase system is used, and pilot lines laid back from feeding points to the switch board indicate the attendant pressure.

Public lighting.—The street lighting for Tientsin comprises about 250 32-candlepower lamps, the distributing feeders of which are connected to their own system of mains and are controlled in groups.

House installation.—This work will be carried on by native labor under the supervision of a foreign engineer and in accordance with the rules laid down by the Institution of Electrical Engineers.

EQUIPMENT OF SHANGHAI AND OTHER CITIES.

Shanghai has under municipal control unquestionably the best-equipped electrical plant in China, and a franchise has recently been granted for a modern electric railway system.

Canton has also an electric light and power company which has just obtained a thirty-year monopoly, and it is maintained by those best informed as to the situation that conditions would justify the installation of an electrical surface road.

Hongkong has a paying electric surface road in addition to a fair electric light and power company.

Peking has an electric-light plant. About five years ago the German firm of Siemens & Halske began the construction of a surface road, but the work was interrupted in 1900, and it has not yet been completed.

Hankau is about to acquire an electric light and power plant, but would not, for some time at least, support a trolley line.

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There are a large number of small isolated plants for both light and power scattered throughout China, and these, acting as an introduction for larger and more elaborate work along the same lines, are gradually being supplanted by the installation of general plants. It may be assumed that these central plants will, in turn, educate and prepare the native population for the great construction work for which China apparently offers opportunities to foreign skill and enterprise.

LACK OF SUPPLIES.

As there are no firms in this part of the country carrying even a fair supply of electrical material, there is constant complaint because of the delay in the delivery of the goods ordered for construction work. This uncertainty, coupled with the difficulties of insuring their arrival in proper condition and according to plans and specifications, makes it almost impossible, according to electrical engineers, to give satisfactory estimates on any branch of the work.

In sharp contrast to this condition may be cited the success of the Babcock-Wilcox Company. This firm has in the last two years placed over 11,000 horsepower in the ports along the coast, and is one of the few companies engaged in the manufacture of mechanical accessories having a properly appointed agent with sufficient knowledge of his line to superintend the installation of his own material.

DETAILS NOT OBTAINABLE.

It is obviously impossible to give detailed information regarding the cost of construction in China. It may be said, however, that Chinese wire men can be secured for 50 cents Mexican (25 cents gold, approximately) a day. These men would, of course, require constant supervision, but when properly instructed and watched do fairly good work. Poles up to 40 feet in length at any reasonable diameter can be easily obtained at prices ranging from $3 to $4 gold for the larger sizes (40 feet, butt tapering to 10-inch top). These poles have an average life of eight years under ordinary conditions.

It would take a competent and energetic American engineer a comparatively short time to become familiar with the situation and place himself in a position to enter a field that requires and unquestionably will receive careful cultivation in the near future. It would be necessary, of course, under present conditions, to overcome prejudices and inspire confidence. The boycott temporarily paralyzed American enterprises in China, and although it has collapsed officially, it is impossible to predict, because of its far-reaching effects, when normal conditions will be restored. It has produced a feeling of business uncertainty and timidity that neither edicts nor proclamations from Peking can immediately dispel, and the unfortunate ending of the Canton and Hankow Railroad project has filled the Chinese mind with added suspicion and distrust of American methods. Notwithstanding this, however, it is certain that Chinese authorities would not hesitate to entertain a proposition for electrical construction that would be advantageous to a municipality, even though it were made by a representative of a company doing business in the United States.

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PRESSING DEMANDS.

REASONS WHY BUSINESS IS HELD BACK.

In connection with the foregoing report of Special Agent Burrill, a letter received from Consul Anderson, of Amoy, on the same general subject, will prove interesting. The two reports in all essential features agree, but Consul Anderson is not optimistic regarding the immediate outlook. It is pointed out by Mr. Anderson that the sale of electrical supplies can be extended by well-directed efforts of competent agents from the United States and that there is need and demand for such supplies. He also refers to obstacles created by Chinese officials, resulting from national prejudice to the granting of franchises to foreigners, but this prejudice will undoubtedly be overcome by the constantly pressing necessity, increasing popularity, and growing demand for the electrical system. Mr. Anderson's letter follows:

The prospect for much being done in the way of electrical construction in China in the immediate future is not very bright. There is no break in the demand for electrical goods and machinery which has existed for some time, but there is not that prospect for a material increase which electrical men have hoped for and which might naturally be expected where the field for electrical work is so great. Upon the subject an American who represents an English electrical supply house says:

"It is impossible to accurately measure the actual present demand for electrical installation and supplies in China owing to the extent of the field and the lack of any superintending agency or any official returns of work done. A review of the work actually done in the larger cities does not promise any great boom in the business. Practically all the construction work and sale of appliances are secured and handled through fiscal agents for houses in England, Germany, and the United States, houses generally too small to support agencies of their own in China. There are a number of reasons why the business is held back. For instance, there are no houses in any part of China which carry in stock for immediate use even a fair supply of electrical material or supplies. The natural result is that there is constant complaint, due to the delay in the delivery and execution of orders and even in the more ordinary repair work. There is additional uncertainty in the business due to fluctuations in exchange and the varying cost of freightage. It is very difficult to give satisfactory estimates upon any branch of work. One Shanghai firm has in the past two years placed over 11,000 horsepower in the several Chinese ports along the coast. It is significant to note that this is one of the few firms engaged in the business which manufactures mechanical accessories and maintains properly equipped agencies with representatives having sufficient technical knowledge to superintend the installation of his own material."

EXISTING PLANTS.

In spite of these drawbacks considerable work has been done and more is in prospect. China certainly is an immense field for work in electrical lines. Hongkong is the possessor of a profitable electric

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street-car system, a very fair electric light and power establishment, and numerous small electrical plants. Shanghai probably has the most substantial electric-light plant in China, and has recently granted a franchise for an electric street-railway system. Peking has an electric-light plant and an electric tramway connecting the city with its railroad station. Tientsin has recently granted a franchise for a street-railway system. Its electric-light plant is of recent establishment but promises to be a profitable undertaking. The electric light and power proposition in Canton is in the control of a thirty-year monopoly which probably will give the city all it needs in the way of service in that line, but there is room for an electric street railway, and this may be had in the course of a short time. Hankau is making arrangements for an electric light and power plant, but probably has not developed far enough along modern business lines for a street-railway system. Hangchow is still talking of an electric railway to connect the city proper with the foreign settlement at the end of the Grand Canal, and this probably will be had in the course of a short time.

DISPOSITION OF THE AUTHORITIES.

There are favorable prospects in other places, but taking the country as a whole it is doubtful if there will be much done for some time to come. The disposition of the Chinese authorities in the matter of electrical installations is very much the same as it is with respect to railroad enterprises. They are disposed to grant no franchises except to Chinese people, and the Chinese people are not in a position, either financially or otherwise, to do anything. At present the electrical men who are accomplishing anything are confining their efforts to communities which are controlled by foreigners, and I doubt very much if much can be accomplished even by the most persistent efforts and by direct representation in other places in China at the present time. The feeling among the dominant classes of the Chinese people is not hostile, nor is it necessarily indifferent. But the disposition to give franchises only to Chinese, whatever may be the real reason or the real theory back of it, is unquestionably strong at the present time, and will probably be stronger before there is a reaction which will allow work to be done by foreigners. I do not believe that the work will be done to any great extent until it is done by foreigners. There is a large number of small isolated electrical plants in China for both light and power. Most of them are rapidly being rendered useless or unnecessary by general plants. In a number of cases there has been trouble over electrical plant propositions. At Ningpo, for instance, an alleged American concern secured a franchise and organized a company to establish a light and power plant, but the scheme seems to have been little more than a swindle, and the result is that electrical installation in Ningpo is held back for probably a decade. There has been pulling and hauling in Amoy over the electric light proposition at one time or another, but the present indications are that a franchise on Kulangsu Island, the residence portion of Amoy, will be given an American agent for a British company. The concern will be a small one at best.

The present of the electrical business in China is not very attractive for American business men, but the possibilities of the future are so great that American concerns will make a grave mistake if they fail

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to keep representatives in the China field. When once electrical construction in the Empire is really commenced the concerns on the ground will probably have more work than they can do and there will probably be sale for more machines and appliances than they can readily and promptly furnish.

MATCHES.

JAPAN COMPLETELY CONTROLS THE MARKET.

In the following report Special Agent Burrill shows that the sale of matches in China is completely within the control of Japanese manufacturers, and that under existing conditions no others can successfully compete with them. To the natural advantage that comes from proximity, the Japanese manufacturers derive an additional advantage from the protection extended by their Government. Mr. Burrill, writing from Shanghai, says:

Japan is in control of the market for matches in northern China, and her position appears to be unassailable because of the low price at which she can lay down the product in Shanghai for distribution throughout central and northern China. American manufacturers might be able successfully to compete by the establishment of a plant in China and the introduction of American machinery and methods of transacting business, but even then the result would be problematical, for it would be necessary to import the logs from the United States, as China produces practically no wood suitable for the manufacture of matches. There are now seven match factories in northern China, three of which are running regularly, but they are all compelled to import wood from Japan, and it is regarded as assured that if they should become formidable competitors in the market the Japanese Government would impose an export tax on logs sufficient to kill Chinese competition. The Japanese Government controls the forests of Japan, and sells the timber to match manufacturers at a price far below that at which a similar article could be bought in the United States, while the cost of labor is small, and the freight rates between Japan and China low, compared with those from the United States. These conditions operate against the introduction, on a large scale, of matches manufactured in America.

JAPAN POSSESSES THE MARKET.

Practically 60 per cent of the matches manufactured in Japan are sold in China, and, in the northern provinces at least, constitute as nearly as can be estimated about 96 per cent of all the matches consumed. Great Britain and Switzerland are in the market, but their sale is so limited as to be of little importance. The highest price for which Japanese matches are sold is 3 cents Mexican per dozen boxes (figured from the price per case in taels), inferior grades, of course, selling at lower rates. They can be bought in large quantities for 9 cents gold per gross. In this business, however, it is not the Japanese manufacturer who makes the profit, but the Chinese buyer or middleman, whose annual transactions have assumed large proportions. He enters into a contract with a Japanese manufacturer to take his

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entire output of a certain grade at a stipulated price, advancing a sufficient sum for the purchase of raw material and running expenses and paying the balance on delivery of the goods.

COMMERCIAL SAGACITY OF THE CHINESE.

Through Chinese sources I am informed that the small Japanese manufacturer is satisfied if his factory nets him from 300 to 500 yen ($150 to $250 gold) a year, which clearly illustrates the difference between the Chinese and Japanese races from a commercial point of view. The former are a nation of merchants, with the instinct for trade born in them, keen, energetic, and conservative in their dealings, and whose commercial integrity is everywhere recognized. The Japanese are essentially manufacturers and imitators, but are as yet, to a large extent, either unable or disinclined to market their own products. This, however, does not prevent the introduction, in enormous quantities, of Japanese goods of various kinds in the Chinese market, and, in this particular instance, at prices and under conditions with which the American manufacturer would find it difficult, if not impossible, to compete.

BUSINESS METHODS.

NECESSITY FOR AMERICAN AGENTS TO SELL AMERICAN PRODUCTS.

American manufacturers and merchants will find much valuable information in the annexed letter from Consul Anderson, of Amoy, regarding business methods that obtain in China. The suggestions made about establishing agencies at Shanghai and Hongkong, and the employment of Americans to superintend and push the sale of American products through Chinese agents specially selected for the particular work, are not entirely new, but the fact that our manufacturers have not properly appreciated such advice in the past justifies its reiteration. Consul Anderson's letter follows:

There are a number of problems which American business men are to face in the growing trade of the United States in the Far East, and one of them is that of personal commercial representation in China. It can hardly be expected that American trade will grow very rapidly or that Americans can meet the sharp competition of European nations with men on the ground unless American firms are represented here by fully as good men or with fully as good a system as Europe. In the United States men have come to appreciate the advantage of traveling salesmen. Business which a few years ago was done by correspondence alone, where it was done at all, is now done by the commercial traveler.

The same reasons which have operated to build up the commercial traveler system in the United States operate all the more strongly to demand personal representation in China. If the field here was what it was in the United States; if business methods were the same; if population could be counted upon as meaning the proportionate sale of any particular line of goods; if, in short, any of the rules of American business men could be applied to the situation here with any reasonable degree of success, there would be a good many American business houses ready to send men here and have them fight for

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business. But the limited experience most of these houses have had has demonstrated that conditions here are not what they are in the United States; that ordinary rules will not apply; that the Chinese trade may or may not mean a given consumption of a certain class of goods, and that competition here is fully as keen in most lines as it is at home, with the added element of uncertainty due to different methods of conducting business.

Foreign business representation in China, as a whole, exists in the shape of business houses in one or more of the open ports of the Empire. There are a few foreign firms that have what may be called "traveling men," but at present they are far in the minority, and the great expense of keeping them going holds back many other firms from sending out such representatives.

METHODS OF THE PAST.

The old business houses in China are very largely English concerns established in a small way in the early days of foreign trade. These gradually expanded as business expanded. Most of them were founded as partnerships or by individuals, but have been merged into corporations under the old firm names. The larger concerns have established branch houses under the control of foreigners, or have agencies in the way of Chinese houses in most of the ports of the Empire. They handle foreign goods mostly on commission.

This is the case, for a number of reasons. In the first place, most of them originally were commission houses. In the second place, the state of international exchange, its fluctuations and troubles, its constant operation against fixed calculations for international transactions, has caused them to devise some way of avoiding the results of a rise in exchange between the time goods are ordered and the time they are received. The old English auction system of disposing of wholesale lots of goods also has its effect. From this old and conservative system, which has depended more upon the demand for goods which already existed than upon any demand it might develop for its prosperity, there has come to be the development of agencies of all sorts among the merchants of the ports of China.

For instance, a certain American camera and photographic concern has established an agency in Shanghai for the sale of its goods. This "agency" is merely an agreement with a certain firm there that it will have the exclusive right to sell the American concern's goods in Shanghai. There may be—as a matter of fact, there are—half a dozen or more other stores which ought to handle these goods, but under the present system they can not. The same is true of a certain line of American stoves in the same city. In short, the list could be multiplied indefinitely. The sale of each line of American goods, while better than none at all, is being hampered by the nature of the agreement under which it is sold.

PRESENT SYSTEM WORKS AGAINST AMERICANS.

It is safe to say that the present system, which is better than nothing when business is in a pioneer state, will not meet the requirements of growing business, nor is it likely to stand the test of the first vigorous American trade campaign. As a matter of fact, the present

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system of representation in China favors existing conditions and non-American trade. It is safe to say that British firms, for instance, will not handle American goods unless conditions compel them to do so, and they will not handle them to any greater extent than is necessary under the circumstances. British firms will represent American concerns only to the extent that they are required to act. This is said in no spirit of criticism.

This should be expected of them as a patriotic people, used to their own goods, their own customs, and their own business methods. Nor will the business methods in vogue in the Far East, mostly British at the present time, suit American traders very long. As it is, most American goods sold in China at the present time are owned by British or others not Americans at the time of their sale. If there was no other reason for changing from present methods this alone would be sufficient to demand action from American manufacturers and producers.

SHANGHAI AND HONGKONG TRADE CENTERS.

The first fact to be realized in connection with any scheme for personal representation in China is that practically all of the foreign goods sold in China pass through Shanghai and Hongkong. This is to be the case for many years to come because of the natural advantages of location, if for no other reason. It is probable, therefore, that Shanghai and Hongkong will be the centers from which lines of trade will run in all directions throughout the Empire. Logically the course for the American business man to follow if he is to establish representation in China is to secure headquarters in one or both of these centers. The practical operation of trade follows the theory of the matter, and the most successful of the American concerns working in China at the present time are those which have established administrative offices in both Hongkong and Shanghai and have worked from these centers.

TWO NOTABLE EXAMPLES.

The crux of the matter, however, is in the nature of representation from this point on. The two largest American concerns in China, the Standard Oil Company and the British-American Tobacco Company, have inaugurated the policy of placing Americans, generally young men, in charge of certain large districts and of employing Chinese as subagents, generally on a commission basis, for their operation in the smaller ports and in the interior. As is usual here, the employment of these Chinese agents is very largely in the control of the Chinese compradores of the agents of the concerns, the compradores in this respect being almost the same as head agents or superintendents of agents. Goods are sold largely upon a commission basis, the corporation concerned renting warehouses, where necessary, and affording every facility for the extension of trade. They consider it, as it really is, their own trade, though it may be done upon a commission basis; some cases may even be transacted in the name of the agent. Infractions of trade-marks or similar crimes against the business are prosecuted by them. In short, they are simply conducting the business through Chinese representation, and this is the point I wish to get at in this report.

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AMERICAN PROPAGANDA NECESSARY.

Missionaries working in China came, long since, to the conclusion that if China is to be Christianized it must be through the work of the Chinese converts to the Christian faith, working under the directions of the missionaries, and the practical result of Chinese mission work has fulfilled the prophesy of this idea far beyond expectations. Nearly all the effective work in evangelization nowadays is done through native Christian workers. Without wishing to be taken as in any way disregarding the religious nature of this work I am free to say that the American trade propaganda must depend for success very largely upon the same principles, and if American trade is to be made what it ought to be, it must be through the Chinese themselves, working upon each other under the direction of trained American business men.

VARIOUS DIALECTS HAMPER FOREIGNERS.

The ideal representation in the Far East would be an American who is able to speak the language of the country in which he is working. It is very doubtful if this can ever be properly attained by Americans or any other nation in China. A person who has the knowledge of the Mandarin or official language or dialect, can deal with few merchants or business men in China. One who knows Cantonese can do nothing in the central or northern provinces, and one who is familiar with the dialects of the central provinces can do practically nothing in either the north or south.

CHINESE WILL CONTROL TRADE.

Another great factor is that such representation costs far more than such a factor in the sale of goods ought to cost. On the other hand, the Chinese people are shrewd traders, experienced in every art which brings a profit. In the course of time they will control the business of their own country—foreign business and all—by the sheer force of their ability to cope with the foreigner in trade matters. While there will be more or less exceptions in some ports, where special foreign interests will have special men, I am more and more of the opinion that in the near future Chinese firms will control business even in foreign concessions in the open ports. In new ports, as they are opened, the Chinese business men will take the lead and maintain it. Foreign firms can not compete with them in the way of maintaining a large business at low cost, particularly in matters of labor, in knowledge of the Chinese people, in the ins and outs of the Chinese political affairs, in any and all of the business methods peculiar to the Orient. The Chinese will maintain their control of Chinese business affairs by merit.

WHAT AMERICANS SHOULD DO.

It seems to me, assuming that this is to be the case, that the sensible thing for the American manufacturer to do is to secure personal representation in the person of young and well-educated Chinese. If the pushing and sale of a particular line of goods requires special instruction and training a corps of representatives could be trained by one man from home, or the Chinese representatives would probably come

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under the exempt classes under the exclusion law enough to permit of their being trained for this service in America. Such service would be far less costly than American service in the Orient and in the long run would be more efficient.

As a matter of fact the greater portion of actual representation in China at the present time is in Chinese hands. English and other foreign firms do business through a Chinese compradore. What the compradore favors the firm favors; what the compradore says can not be done the firm does not attempt to do. What is done is done by the compradore, and there is no reason why American manufacturers should not deal directly through the compradore instead of indirectly through the firm which has other interests to serve while looking after the business of the American company. Schools for the teaching of English and business branches are to be found all over China, but especially in the treaty ports. They are rapidly turning out young men who will make good representatives of foreign interests if given proper training and proper support.

PERSONAL LIABILITY A FACTOR.

The subject of personal representation of American manufacturers in China is one which needs more attention than it is receiving. Not long ago a certain arsenal in China was fitted with new machinery. The machinery came from Germany. The price paid for it was considerably higher than that for which it would have been obtained in Great Britain or the United States. When asked why the higher price had been paid, the Chinese officials frankly declared that they bought the machines of a personal representative of the Germans concerned, on the ground that if things were not as represented, if the machinery failed to do its work or was not up to standard, they could hold the personal representative responsible. Of British and American firms nothing except the reputation of the houses concerned was to be had as a guaranty that the goods would be satisfactory; and, if for any reason, the goods were not satisfactory, there would be months of delay while the trouble was being corrected, assuming that it would be corrected at all without dispute.

American concerns expecting to do business in China must have direct representation; and this representation should primarily be American rather than European, and should consist of a superintending force at Hongkong and Shanghai, and at other large ports as the field is developed, with the real agency work in the hands of specially trained Chinese. This plan has been successful with large American concerns here, and it will be all the more successful in the future, since conditions for its successful development are constantly growing more favorable.

LOOKING TO THE UNITED STATES.

DEMANDS OF MATERIAL PROGRESS AND INDUSTRIAL BETTERMENT.

Consul Anderson furnishes a further interesting report upon commercial and industrial conditions in China and the changes that are constantly taking place in that vast Empire. He expresses the opinion that the principal cause for slow development of trade with the United States is due to the lack of enterprise in this country rather than to

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anything that has been done or left undone by the Chinese. The people of China have, he declares, reached out to the United States for trade and have been compelled to ask for American goods before such goods could be obtained in considerable volume. Mr. Anderson further declares that the lack of commercial organization in the United States is a positive hindrance to the development of trade, and further declares that the boycott against American goods is evanescent in character and has not resulted in any serious decrease in sales of American goods. His letter follows:

In 1904 the United States sold goods to China valued at $20,426,662, as compared with a total value of $18,109,894 the year before. The part of cotton in this trade has been reviewed a number of times heretofore. China imported in 1904 flour of foreign make to the value of $2,513,750, as compared with $2,008,795 the year before; and the flour both years was mostly American, most of it coming by way of Hongkong through British hands, and therefore with a British profit between the American producer and the Chinese consumer. American kerosene last year was imported to the value of $9,250,435, as compared with $4,675,838 the year before. Allowing for the total of American cotton shipments these figures on flour and oil represent a very large share of American trade in China. The total import of railroad machinery and materials in 1904 was $4,232,521 gold. The total imports of foreign machinery were $1,862,027 gold. Evidently the United States did not send any great amount of exports in this line, although it sent many million dollars worth of them elsewhere.

PRESENT SALES SYSTEM BAD.

An examination of the present sales system, or rather lack of system, in American trade here convinces one that most American products have practically been given no introduction in China. A few instances where there has been importations of American goods by some one familiar with their merits are to be noted, and in the older and more important ports, notably Shanghai and Hongkong, with its quasi-Chinese relations, a precarious importation of a variety of American goods may be noted. But the fact that American exports to China have varied from fifteen and a fraction millions in 1900 to ten and a fraction millions in 1901, twenty-four and a fraction millions in 1902, eighteen and a fraction millions in 1903, and to twelve and a fraction millions in 1904, with indications that they are to get back during the current year to the high record of 1902, demonstrates that these importations are merely precarious and that American export trade to China is not upon a firm foundation or based upon healthy trade conditions. That such conditions exist shows that either there is something the matter with trade conditions in China or in the United States. The fact that Chinese imports have been increasing steadily from year to year seems to indicate that the cause of the present trouble is in the United States.

CAUSES OF PRESENT CONDITIONS.

As to what are the causes of this state of things opinions will differ indefinitely. Unquestionably the state of finances and the price of

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raw materials in the United States have much to do with the situation. America seems not to have been in a condition to take advantage of movements in the Chinese cotton market or to do much figuring in some other lines. But the fact that American cottons made up the bulk of the trade in north China within the past few months, proves that the state of the market in the United States has less to do with the fluctuations in Chinese trade than other things. It is a somewhat significant fact that favorable changes in the Chinese cotton market are followed by large sales of American cotton, though not always at the advance figures. In other words, Chinese trade has reached out to the United States for what it could not get at fair prices elsewhere. Instead of the United States offering its goods to China and forcing trade, China has been compelled to ask for American goods before she gets them in considerable volume. The United States is hardly desirous of having its trade depend upon the solicitation of buyers. Nor need it be expected that China will seek American exports until there is distinct benefit in so doing. Naturally China will buy the goods offered for sale in China, other things being equal, and the nation which does not offer an aggressive commercial campaign in its own behalf can not expect trade. I believe that the trouble in the United States is a lack of commercial organization for work in China and the Far East generally. China is ready for foreign goods, and aside from the evanescent boycott of American products on account of the exclusion treaty—a boycott, so far as my observation goes, that has resulted in increased sales of American products—it is ready for American manufactures.

POSSIBILITIES AND LIMITATIONS.

Assuming that China is on the verge of immense changes in its social, industrial, commercial, and political conditions, and that it is ready to reach out across the sea for foreign goods and foreign ideas, the United States needs to study well the possibilities of trade in China. The attention of American manufacturers is now being given to China, and doubtless each line of manufacturers, when once the situation in China is understood, will best understand what they can do in the sale of goods of their class in the Empire, and what is to be done to effect such sale. At the same time there are several important limitations to their activities to be pointed out, and some of the limitations of China as a buyer must be appreciated. The exports of the United States may roughly be divided into food stuffs and manufactures, notably machinery and the products of machinery. Of the two classes, the first includes many things which China can get along very well without, even assuming that the Empire is to make the progress in modern ways which it is hoped it will. China has fed its millions for many generations, and there is no strong reason why it will not be able to do so indefinitely.

At the same time America does and can furnish certain classes of food stuffs which China can use with profit. Foreign flour is not a necessity from the Chinese standpoint, but its use is increasing at an immensely rapid rate because the Chinese find that its cost is reasonably within their reach, its merit as a variation from their rice diet is both pleasant and healthful, and it fills in gaps in the flow of supplies caused by poor rice crops in local fields—gaps which the laws against the export and sale of rice out of a district of China without official

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sanction often render both embarrassing and dangerous. Hence it is that the importations of American flour are rapidly increasing. If flour marked the full limit of American exports of this class, however, the prospect would not be very encouraging, for in a few years the wheat fields of Manchuria and North China, not to mention the possibilities of the Siberian plains, will be furnishing vast quantities of flour for the millions of Chinese south of them.

USE OF AMERICAN FLOUR WILL INCREASE.

It is probable that the use of flour will rapidly increase in China—much more rapidly than Chinese means of supplying the demand from home. American flour men will continue to send flour to China for many years. Aside from flour, progress may not be very great in other lines. The Chinese themselves, except among the well-to-do classes, can use very little foreign fruits and meats. Yet the sale of meats, tinned and smoked, and in the course of time, frozen and fresh, will be considerable among the foreign population of China. At present the sale is not large enough to receive separate consideration in the customs' returns. There is a growing demand for American fruits in the coast ports. Each autumn shows increasing imports of Oregon and California apples. There ought to be a constant increase in the use of American dried fruits. The importations of dried fruits last year were $447,755 gold, as compared with $178,728 in 1903—a satisfactory increase of about 150 per cent.

One of the most notable American food products gaining foothold in China is that of condensed milk. A few years ago the product was practically unknown. In 1903 the imports in China reached a total of $168,760, and in 1904 it reached $252,585. And in addition to this there are large exports of a condensed milk made in Canada by an American company.

DEMANDS OF MODERN PROGRESS.

It is in the line of manufactured goods other than food products, however, that most hope for foreign trade in China lies. China is looking to new things—to modern science and its benefits; it is looking to material progress and industrial betterment; at least its friends hope it is looking to these things. Modern progress and modern life demand many things which China does not possess. Machinery is the magician's wand with which it is to open many possibilities. Yet it must not be expected that all China is to demand machinery of any kind at once. The import trade of China, in short, is at present a mere beginning of what it ought soon to become, and the cultivation of its possibilities devolves more upon foreigners interested in selling China goods than upon the Chinese themselves.

CHINA NOT TO BE JUDGED BY THE PAST.

American business men can not reason as to the future trade of China by its past trade. Nor, indeed, can they reason easily as to its present actual trade possibilities by its present exports and imports. The total of exports and imports does not measure the total trade of the Empire any more than similar figures as to the imports and exports of the United States represent the real trade of that nation. The vast bulk

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of the Chinese trade is with the Chinese in the same manner that the vast bulk of American trade is with Americans. The foreign commerce of China is much smaller in proportion to the total trade of the Empire than is the case with almost any other nation. The Chinese are a trading and an exclusive race. For centuries before China was opened to foreign trade the nation lived, thrived, and produced, traded, and grew wealthy. Gradually foreign influence has been felt. The course of Chinese trade for the past hundred years or more has been visibly influenced by the fact that the Chinese found they could sell some of their products abroad. In the past third of a century the nation has found that it can sell other products than silk and tea to the foreigner, and it has now a long list of important exports. And just as soon as China found that it could sell goods it found that it was advantageous to buy foreign goods. Thus the imports have constantly increased.

PRESENT AMERICAN TRADE SMALL.

The present trade of the United States with China is almost infinitesimal compared with the stupendous total of Chinese trade and trade possibilities. Last year the United States shipped to China about $15,000,000 of cotton products, a record above the average. The total imports of cotton products in China last year were $86,858,313. It is probable that the total cotton consumption can not be much less than $1,000,000,000 annually. Two dollars and a half gold for the average person in the Empire will make the amount. The Chinese use cotton for many purposes almost unknown in the United States. Such is the trade that the manufacturers and producers of the United States are now face to face with an economic position second to no nation, and have natural location and advantages, as far as China is concerned, second only to Japan.

TRADE WITH THE UNITED STATES.

In the fiscal year ending June 30, 1904, China bought goods from the United States to the value of $12,862,202. In the year 1904 China exported raw cotton to the value of $17,368,116, which is greater by a third in value than its total imports from the United States. American exports to China for the year 1904 were about one-tenth of 1 per cent of China's total imports. The total export and import trade of the United States in 1904 was $2,451,959,163. With a population of 80,000,000 in round numbers this is a per capita foreign trade of about $31. The total exports and imports of China during the same year were $408,482,403, which, with a population of over 400,000,000, gives a per capita foreign trade of about $1. When, therefore, the per capita of foreign trade in China becomes one-fifth of that of the United States the foreign trade of China will equal that of its American neighbor.

DECLINE IN THE TEA TRADE.

In reviewing the exports of China, with which the Empire pays for imports which the foreign nations are so anxious to sell it, the American business man will be impressed with the situation of tea. The earliest traditions of Chinese trade generally have been centered about tea and silk. Yet in these days of immense tea consumption, and

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when American communication with the Orient is comparatively rapid and frequent, we have the spectacle of a fall of tea exports from 58 per cent of China's total exports in 1864 to 12½ per cent of its total exports in 1904. In the ten years from 1895 to 1904 the loss in the trade was from total exports of 248,757,300 pounds in the former year to 193,499,900 pounds in the latter year. And this immense loss has taken place in spite of the general great increase in Chinese trade and in spite of the immensely increased use of tea in the world at large.

HONGKONG A DISTURBING FACTOR.

Hongkong, now the great distributing center for all of southeastern Asia, is the disturbing factor in the Chinese trade statistics. Into this mart the goods of all nations are poured, nor is there in Hongkong that proper check upon the business of each nation concerned that goes with a tariff system. Into Hongkong, as a distributing center, and on the other hand into the city as a shipping center, pass goods for and from China to the amount of $159,560,118 out of a total of $408,482,403 for all China. Outside of Hongkong, Japan leads the list of nations doing business with China, the Japanese exports and imports amounting in 1904 to $61,705,639. In this total for Japan is included exports to and imports from Formosa, which are considerable. It is probable that considerable American and other foreign goods are sold to China by Japan and go in the total of Japanese trade. Next in this list of countries outside of Hongkong comes Great Britain, with imports and exports of $50,743,643. Then comes the United States with $39,388,244, total imports and exports, largely goods going to the United States.

India has a trade with China of $24,224,545. The contingent of Europe outside of Russia has a total trade of $47,617,833. Russia has less than $5,000,000, and the greater portion of this is Chinese exports. All these nations send goods to Hongkong. Unquestionably, however, Great Britain not only sends more goods than any other nation, but she sends a larger proportion to Hongkong than to China proper. Indian trade is British trade. The dominance of British shipping is overwhelming. While, therefore, there may be many questions as to details in the course of trade in China, there are a number of very patent and impressive facts which may be stated without question. And it is these salient features of foreign trade in China which the American people at the present time must learn and whose force they must appreciate.

THE TEA TRADE.

PROPOSITION FOR INTRODUCTION OF MACHINERY.

Regarding efforts being made to restore the tea trade, which has been largely supplanted by Indian and Ceylon teas, the following from Consul Anderson will interest our merchants:

In a report to the Department from Hangchow under date of November 29, 1904, I called attention to the depressed condition of the trade in Chinese teas in spite of the fact that Chinese teas were generally of high grade and superior quality. At that time it was noted that Chinese tea people, alarmed by the manner in which Indian and Ceylon teas had driven Chinese teas out of the markets of the world, were dis-

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posed to undertake an aggressive campaign in behalf of the Chinese product, the campaign including systematic advertising of Chinese teas in the United States in the manner in which Ceylon and Indian teas are now being advertised under the auspices of the Indian and Ceylon tea men.

This proposed campaign in behalf of Chinese teas took the form of the sending of a commission to India and Ceylon to investigate tea conditions and tea-curing processes there with a view to their possible introduction in China. The commission is composed of Mr. Leonard A. Lyall, of the Chinese imperial maritime customs service; Hon. Chen Shih Huang, expectant taotai of Nankin, and Mr. Shen Kan, English interpreter of the viceroy at Nankin. In addition to the three members of the commission several Chinese business men connected more or less intimately with the tea trade are making the trip at the same time. The commission proceeded to Ceylon at the opening of the tea season in March and have spent most of the time since in that island, planning to proceed to India about the last of July.

RESULTS OF EXPERIMENTS.

While the work of the commission is not yet completed, it has gone far enough to demonstrate a number of points of material importance. Discussing the prospect a member of the commission says:

"I am quite of your opinion that it is chiefly systematic advertising that Chinese teas require to bring them to the foreground again. There is no doubt that they are more wholesome and delicate in flavor than either Indian or Ceylon teas. Tea in Ceylon is grown in such different conditions to those which obtain in China that I think little good can come of investigating it. There is no winter season here and the bushes continue to bring forth young leaves all the year round till the bush becomes exhausted. Then it is cut down and gets a rest for a few months.

"Manufacture by machinery is certainly cheaper than by hand and it is equally certain that the result is not so good. But it is only by experiment that one could learn whether it would pay China to adopt it or not. In India, where the climate more closely resembles that of China, we shall be able to judge better. The chief difference between Indian and Chinese cultivation is that in India they cut the bushes down in the winter; in China they do not."

The result of the experiments of the Formosan government with modified Indian and Ceylon machinery in the Oolong trade has likewise demonstrated that machine-cured tea can not compare in quality with the hand-cured product. Inasmuch as the Chinese product is to obtain favor, if it obtains it at all again, by its quality rather than by its cheapness, the natural and logical conclusion is that machine curing will not be introduced in China. An additional reason why machines will not be introduced in China is to be found in the fact that the introduction of machinery will be opposed by the people.

THE LIKIN TAX A HINDRANCE.

It has been shown in the reports heretofore that Chinese tea can be produced even more cheaply than the Indian and Ceylon product if

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the burdensome likin exactions are reduced or removed. What is really the matter with the Chinese tea trade is a lack of foreign demand for China's superior product, which would doubtless follow a campaign in its behalf abroad, together with the need of such a modification of the Chinese taxation scheme as would permit of its production without the burdensome likin exactions and heavy taxes. The minute that Chinese teas are machine made they will, to a great extent, at least, be reduced to the level of Indian and Ceylon teas with which they come into competition, and at the same time they will have all the tax and other disadvantages under which they now labor.

CHINESE MONEY TROUBLES.

LARGE DECREASE IN DEMAND FOR COPPER PIECES.

Consul Anderson writes that, in consequence of a large decrease in the demand in China for copper or brass 1-cent pieces, a large quantity of copper, purchased for coinage purposes, has accumulated at Shanghai, and it is feared that serious financial trouble will result in a number of Chinese ports. Mr. Anderson writes:

Present indications are that there will be no further occasion for speculation as to the use China is to make of vast quantities of copper purchased abroad like that which developed all sorts of rumors in the copper world a little less than a year ago. It is said that there are 10,000 tons of copper in Shanghai not removed from the importers' godowns by the Chinese governmental representatives, because of a decrease in the demand for the copper or brass 10-cash or "1-cent" pieces, for the coinage of which this copper was purchased. The decline in the demand for these coins is very marked, and it is quite possible that it will lead to serious financial trouble in a number of ports of the Empire. The coinage of this copper money has been proceeding at a stupendous rate for some time, being especially great during the past year. New mints have been established for the express purpose of making these coins, and old mints have been enlarged for the same purpose. In previous reports I have pointed out how very profitable the making of these coins has been to the Government and officials concerned, and it has also been shown how dangerous the issue of such large quantities of this token coinage, worth about one-third intrinsically of what they are professed to be worth, among a people accustomed to the use of the copper cash which generally are worth more in weight, according to the gold value of the metal they contain, than they are commercially in terms of Chinese silver coins. It is of decided significance that the demand for these coins has slackened and the exchange rate for them has decreased. It is possible that the present state of things will be an effective warning of the mistaken policy of issuing such coins in China at the present time and that further and more serious trouble will be avoided.

COPPER BEING SOLD AT A LOSS.

In the meanwhile the large amount of copper on hand in Shanghai is being sold for less than it cost laid down in the godowns now containing it. The Government is taking little or none of it at present, and there is no prospect that it will take any larger portion of it in

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the immediate future. The coins already coined are being sold as a commodity, and when once money is discounted by the common people in China it is very difficult to get it back to par. There is some expectancy that a number of copper mines upon which the Chinese have been at work for some time with a special view of meeting all the demands of the country for copper for this coinage will soon be opened up. With native copper on the market the price of the metal in China will certainly fall to a very low level. There is general fear among some of the ports that much of the Chinese bank currency, which has been current in increasing quantities for some time, will prove of no value. The situation at Hankow is said to be quite serious in this respect.

STUDENTS ORGANIZE.

FOR THE ADVANCEMENT OF THE EMPIRE.

Consul Anderson, in a timely and interesting report, calls attention to the efforts of educated Chinese to organize a movement whose objects are certainly commendable. Its main object is to advance the interests of the Chinese Empire along the lines that have been so successful among western nations. He writes:

The conservative student class among the young Chinese of this consular district are taking considerable interest in an organization termed "World Chinese Student Federation," which is being organized by Mr. Lee Teng-hwee, B. A. (Yale University). The objects of the organization are briefly:

A. To help in the advancement of the Chinese Empire by providing—

1. An educational mission to reorganize the educational system of the country.
2. A translation department for imparting western knowledge.
3. A printing press for publishing books and periodical literature.
4. An employment bureau to supply the country with qualified men.
5. To help the student body both at home and abroad.

B. The federation shall aim:

1. To promote closer union and sympathy among Chinese students residing in all parts of the world.
2. To provide and seek employment for members of the student body when they return from their studies abroad, or when they graduate from colleges in China.
3. To render mutual help and assistance among members in the way of introductions, recommendations, etc., either gratuitously or at a nominal charge.
4. To provide home life and social reunions for students who reside or pass through that port by the establishment of a club in Shanghai, which shall be the headquarters of the federation. Clubs with similar objects to be also established in foreign countries, or wherever branches of the federation exist.
5. To assist deserving students to pursue their studies abroad.

C. The aims of the federation shall be entirely nonpolitical and strictly educational and social.

This organization represents the really progressive and foreign educated element among the young Chinese, in contradistinction to that element which has been back of the agitation for a boycott of

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American goods on account of the Chinese exclusion laws of the United States. While feeling among all educated Chinese against the United States because of these laws is more or less strong, the more conservative and better informed element feels that Chinese interests can best be served by real progress among the Chinese and the compelling of fair treatment by a show of real merit rather than by following a course which may result in further disagreement and hostile feeling. This class is represented by the proposed organization.

What the result of the movement to boycott American goods and American interests generally will be is doubtful. Already the movement has been felt somewhat, but there are indications that its force has been spent. American trade interests, however, would make a mistake in assuming at this time that such is the case.

TOBACCO.

ADVANTAGES OF ADVERTISING.

Consul Sammons, of Niuchwang, says there is an opportunity to sell tobacco, pipes, and smokers' articles in China. He writes:

The British-American Tobacco Company is one of the most active and progressive foreign concerns represented in China. Since Japan took over the tobacco business and made it a Government monopoly in that country, the British-American interests have particularly been active in China, Korea, and the Straits Settlements. The Japanese have been active also throughout the Orient outside of their own island empire. Their goods are on the market from the Straits Settlements on the south to Manchuria on the north.

Heretofore there has been little advertising in China along the lines common to the United States. The imposing array of field advertising signboards which now line both sides of the railroads in Japan, being even more spectacular and showy than those along the lines between Washington and New York, for instance, has not yet reached China. Indeed, in recently making the trip from Hanlow, on the Yangtse River, to Pekin, I observed only one foreign advertising sign, which appeared on the railway station walls at Paotingfu.

In the endeavor to push business, in an advertising way, in China, one of the chief difficulties has been the lack of hotel accommodations. To meet this the British-American Tobacco Company is to provide special cars on land and house boats on rivers. The ordinary passenger car will be converted into a combination office and sleeping section, dining room, kitchen, servants' quarters, and advertising-material room. The car will be supplied with provisions and servants as well as interpreters, and will move from place to place throughout the country where there are railroads. The house boats will, in a similar capacity, serve the river cities and towns.

The utilization of the special car for advertising purposes in China further demonstrates that the construction of railroads, thus affording inland transportation facilities, goes far toward increasing trade possibilities between the Orient and Occident. There is practically no American pipe goods sold in China except to the foreigners. The natives smoke immense quantities of cigarettes. The stock for the British-

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American trade comes from the tobacco States of America and is manufactured into cigarettes at Shanghai, where 1,000 to 1,200 operatives are employed. The product is handled through Chinese wholesalers in various cities throughout China, who pay cash for their purchases direct to local banks, which in turn issue a receipt which serves as a godown or warehouse order for the goods.

FREIGHT RATES.

RELATIVE CHARGES FROM AMERICA AND EUROPE.

Complying with instructions regarding freight charges for merchandise between the Orient and the United States, Special Agent Burrill writes as follows from Shanghai:

It is exceedingly difficult to obtain any accurate information here regarding rates of freight from American and European ports to Shanghai, the local steamship companies concerning themselves only with the charges from this end.

The Pacific Mail Steamship Company and the Occidental and Oriental Steamship Company, for which Fearon, Daniel & Co. are the local agents, quote approximately $8 gold per ton measurement on general cargo from San Francisco to Shanghai. The Nippon Yusen Kaisha, who, besides operating their own line, are agents for the Great Northern Steamship Company, quote about $5.50 gold per ton, weight or measurement, on general cargo from Seattle. This is the rate prevailing for shipments of flour, and may be accepted as a fair average for general cargo.

Regarding the prevailing rates from European ports, the Norddeutscher Lloyd (Imperial German mail steamers) have separate charges for "first-class fine goods," "second-class rough goods," "third-class goods," "dead weight," and "precious metals." These rates are quoted in marks for shipment from Bremen, Hamburg, Antwerp, and Rotterdam per cubic meter or 1,000 kilos, at the company's option.

The Compagnie des Messageries Maritimes (French mail steamers) have issued a pamphlet showing various freight rates, both by mail steamer and cargo steamer, from the ports of Marseille, Havre, Bordeaux, St. Nazaire, and Dunkirk, the quotations being in francs. For mail steamers the through rates to Shanghai are quoted, but for the cargo steamers only as far as Saigon. An additional 5 francs, however, will cover the difference between Saigon and Shanghai.

In large shipments per cargo steamers special rates can be obtained only at the company's offices in Marseille.

IRON MINES.

VALUABLE MINING CONCESSIONS TO AN ENGLISHMAN.

Consul-General Miller, of Yokohama, sends a clipping that records the concession of valuable iron mines to Sir John Lister Kaye. Six million tons of ore are in sight and half as many more are thought to be present. Copper deposits are also suspected. It appears from the clipping that an important concession has lately been obtained by Sir John Lister Kaye in the province of Anhui, Yangtse Valley, where it is believed a perfect deposit of iron ore exists, distant only 3½ miles from

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the Yangtse River. A preliminary mining concession on behalf of the London and China Syndicate was obtained in 1902, and after shafts had been sunk and faces exposed the syndicate made arrangements with Messrs. J. and P. Higson, of Manchester, to send one of their mining engineers to report on the spot. In consequence of this report Sir John Lister Kaye presented the documents appertaining to the concession, through Sir Ernest Satow, to the wai-wu-pu in March, 1904.

Notwithstanding serious obstruction on the part of Chinese officials, the sanction of the Imperial Chinese Government was obtained and the final contract was signed at Peking on June 5. The concession is granted for a period of sixty years with a possible extension, and the total area of the concession is about 50 square miles, or 32,000 acres. Messrs. Higson estimate that there are 6,500,000 tons of iron ore in sight and possibly a further 3,500,000 tons of ore not in sight, and that if smelters are erected 1,830,000 tons of pig iron could be made from 5,500,000 tons of ore to be selected from the above-named mass.

MANCHURIA.

MANUFACTURES AND AGRICULTURE.

NTERESTING FEATURES FOLLOW THE END OF THE WAR.

The following instructive report from Consul-General Sammons, of Niuchwang, on the present status of manufactures in Manchuria will interest persons seeking knowledge of oriental conditions. The report deals but in meager details with the efforts to add manufactures to the Manchurian industries. Such success as has been recorded is not great. Those who know Manchuria best, however, look for a progress along certain lines, not unlike that recorded in the northwestern parts of the United States.

Manchuria is not an important manufacturing section of China; still a number of articles are manufactured in a small way and are exported in limited quantities in addition to the bean products, which constitute the chief exports. In the production of bean oil from beans a very valuable fertilizer is obtained, which is at the present time largely sold in Japan. Furthermore, as the bean and its products form the chief industry and aggregate upward of 65 per cent of all Manchurian exports, Japan has, particularly since the Japanese-Chinese war, become the chief consumer of what Manchuria has to sell. Indeed, the turning of the Manchurian bean fertilizer trade, in the form of bean cake, from China to Japan has resulted in the latter country buying more of Manchuria than all other foreign nations combined.

VALUE OF BEANS EXPORTED.

Manchurian beans and their products are exported annually through the port of Niuchwang to the aggregate extent of upward of $7,000,000 gold, according to the estimated valuation given by the imperial Chinese customs. In round numbers, $200,000 gold is the valuation placed on native opium, a like amount on ginseng and ginseng refuse, and

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$1,389,826 on raw silk and silk refuse exported from Niuchwang in 1904. For the same year medicines, melon seeds, and prawn and shrimps exports amounted to practically $100,000 gold each, and miscellaneous other exports for the same year, ranging from $50,000 gold down to $4,000 gold, were, in order of importance, deer horns, samshu, salt fish, sinews, skins, musk, hides, furs, bristles, hair, native cloth ($6,000 gold), pearl barley, tobacco leaf, and mushrooms.

The medicines are made up of various roots, etc., and the samshu, being a native wine, is manufactured from giant millet seed. The samshu exports for 1904 amounted to $36,618 gold. There is native cloth of local manufacture, but, as shown from the total exported, is of no consequence to the export trade. Much native cloth, however, is manufactured by hand for home consumption in Manchuria.

PAPER STOCK.

Grass cloth is not manufactured in Manchuria, although the district produces a considerable quantity of "window paper" for local consumption. When the long winter comes the window sash, or frames, are pasted over with paper, and to meet this requirement the Chinese in Manchuria resort to the so-called window paper, which is made almost entirely from hemp, and, more particularly, from old hemp ropes.

The process of manufacture is simple. Heavy stone rollers are passed over the pieces of discarded rope until it is ground into small particles of fiber. This is then placed in vats and stirred. Later a large sieve is placed in the vat and slowly raised to the surface. The water trickles away and the thin substance that has been skimmed off is dried on the wall and becomes the window glass of the natives of Manchuria.

This "window paper" retails in Niuchwang at the rate of $1.40 Mexican, or approximately 70 cents gold, for 190 sheets. In weight, 170 sheets equal 3 catties, or about 4 pounds. This would make the retail price of Manchurian window paper in the neighborhood of 15 cents gold per pound of approximately 42 sheets 20 inches square.

Other grades of paper are shipped into Manchuria from other ports of China, some of which is manufactured from straw; and indeed it is said some small quantities of straw paper are manufactured in the province.

GIANT MILLET FOR PAPER MAKING.

Samples of Manchurian giant millet, the staple native food product of the province, have, in accordance with the Department instruction of June 7 last, been shipped from this consulate-general to Mr. Edward Atkinson, Boston, Mass., for the purpose of examining into the paper-stock qualities of the same. There is in Manchuria practically an inexhaustible supply of giant millet stalks, but these stalks are by no means a valueless or useless quantity.

Both man and beast eat the seed of the giant millet of Manchuria, and the stalks are used in various ways. The samples forwarded as above were personally contributed to me by Mr. Chung Chun, imperial Chinese likin collector of Yingkow. The stalks are of last season's growth, and are of the choicest selections from Mr. Chung Chun's estate near Chieh Kuan P'u, 45 miles northeast from Niuchwang.

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It is estimated that the product of an acre (6 Chinese mow) will weigh from 1¼ to 1½ tons of 2,000 pounds. The value of the dry stalks is approximately $5 gold per ton. The stalks are usually sold in bundles of about 10 stalks. In the Chinese method of reckoning there are about 75 bundles to each mow, and 100 of these bundles to 320 catties (a catty is equal to 1⅓ pounds). The native price is $1 to $2.50 (Mexican) to the 100 bundles, equivalent to 50 cents to $1.25 gold.

HOLCUS SORGHUM, OR TALL MILLET.

Holcus sorghum, or tall or giant millet, of which the Chinese name is Kao-liang, is planted in drills in the deep, rich loam throughout Manchuria. The seed is sown by hand and is then covered with manure. Stone rollers are then passed over the drills. When the shoots are 2 or 3 inches high they are thinned to about 18 inches apart. The weeds are carefully destroyed, and, except the earthing up of the roots or "hilling" the plants, as in caring for Indian corn in the United States, no further attention is required until harvest time in September. Should there be heavy rains in May the plants may be greatly damaged by roots losing their hold on the soil, resulting in the plant being blown over. Too much rain or a lack of rain may prevent the seed from ripening; but as a rule, as is the case this season, a good crop is secured.

During the early part of September, the stalks, having reached a height of from 8 to 10 feet, and the heads having turned purple—caused by the small, dark purple cases which contain the grain—they are cut down near the roots. This usually takes place toward the close of the month. The process of thrashing consists of cutting off the heads of the stalks, spreading them on the floor, and thrashing them with a stone roller drawn by some domestic animal. This is completed in about four hours. The grain is then passed through a winnowing machine or tossed up in the air, after being separated from the empty heads, which are used either for fuel or in the manufacture of brooms. The now cleaned, but unhusked, grain is put in sacks and is ready for the market, being sold for fodder. To be fit for human consumption, it must still pass through the process of husking, which consists of placing the grain on a circular stone floor, passing a circular stone roller over it, which crushes the husks, and separating the grain from the husks.

VARIOUS KINDS OF MILLET.

In addition to the giant millet of Manchuria (*Holcus sorghum*, L.) there is what is known as spiked millet (*Setaria italica*). Of this there are two kinds, the yellow and the white—also, what the Chinese term Huang-mi (*Panicum miliaceum*).

The giant millet resembles, when ripening, a field of American broom corn. It is no doubt the most valuable product of Manchuria to the natives. It is the staple food—that is, the seed—of the people, and is fed likewise to the beasts of burden. The seed is also used in distilling spirits, or samshu. Practically all of the giant millet is consumed in the country where it is raised in such great abundance. The stalks are not only used for fuel in winter, but in making mats. These are manufactured by hand from the outer leaves. Compound or yard fences are made from the stalks. They also enter into house building and

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in constructing small bridges. Even the roots are used. In the spring when the fields are plowed the roots are saved and burned for fuel. It is estimated that eight pounds of the seed will sow an acre of ground, and that the yield in grain will be half a ton if the crop is good.

Panicum miliaceum, L., and *Setaria italica*, Kth., termed Huang-mi and Hsiao-mi, respectively, by the Chinese, are sown a fortnight in advance of the giant millet, and thus occupy the soil from the beginning of April to the middle of September. They are sown and cultivated in drills, but the seeds are sown much more thickly than those of the giant millet. Hsiao-mi (spiked millet) requires 41 to 42 pounds of seed to the acre (6.6 mow), which in good years yields from 18 to 19 hundredweight, and Huang-mi, with 40 pounds of seeds, yields but 10 to 11 hundredweight, and is dearer than Hsiao-mi, costing 5 tiaos (roughly speaking, 10 tiaos equal 1.25 Chinese ounces of silver) per bushel of 50 pounds, while Hsiao-mi sells for 4 tiaos per bushel of about 52 pounds. The tall millet grain, on the other hand, costs between 3 and 4 tiaos per bushel of 40 pounds. On some of the large farms seed is sown through a metal tube held in the hand or attached to the plow.

THE RUG INDUSTRY.

Cotton yarn is imported into Manchuria, through Niuchwang, quite extensively, the total imports for 1904 being (in gold) as follows:

From India (British)	$2,176,103
From Japan	558,526

This yarn is used for the manufacture for home consumption of various fabrics, including rugs. The rugs are mostly made at Chinchow, and when sold at Tientsin are popularly known as Tientsin rugs. In their manufacture camel and cow's hair is used, being woven in with cotton warp. Since the Japanese-Chinese war, and particularly since the present war began, the price of these rugs has advanced rapidly. The prevailing price is now 25 cents gold (or 50 to 55 cents Mexican) per square foot. This is approximately 50 to 100 per cent higher than former prices. The Japanese now undersell the natives in rugs, the Japanese product being firmer and more closely woven than the Chinese rug, but not so thick and elaborate in finish. The thickness of the Chinese rug gives it a heavy, rich, and attractive appearance. The coloring of the Japanese product is brighter and frequently by an inexpensive weave that causes it to sell more readily to the native trade than more costly designs. The cheaper grade of Japanese rugs in colors now sell in this market from 10 to 20 sen (equivalent to 5 to 10 cents gold) per square foot. This, however, is the price quoted by Japanese dealers in Japan. Local retail prices are, as a rule, higher.

TRADE OF NIUCHWANG.

RELATIVE IMPORTANCE OF THE COUNTRIES PARTICIPATING.

The following report from Consul-General Sammons is informative regarding existing trade conditions in the most important part of Manchuria. The figures presented are very much in Japan's favor. As the great value of Manchuria is understood when it is known that its soil is exceedingly fertile, that it resembles the Middle West of the United

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States, its importance will be seen. It is to play a leading part in the great industrial movement that is just beginning in lands beyond the Pacific. Mr. Sammons writes:

Ten years ago Japan took little part in the commerce of Niuchwang. The following table shows how it handled 25 per cent of the port's tonnage in 1898 and approximately 50 per cent in 1903, just before the war with Russia temporarily shut out its shipping:

Flag.	1898.	1899.	1900.	1901.	1902.	1903.	1904.
	Per ct.	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*
American	0.60	0.42	0.38	2.23	.....	.....	.....
Austrian	.....	.....	.30	1.05	.....	.....	.....
British	38.98	36.76	38.48	41.80	27.09	29.00	48.79
Chinese	16.19	14.05	4.89	.61	12.38	7.79	9.51
Danish	.25	.50	.....	.....	.16	.30	.....
Dutch	.60	.....	.....	.....	.47	.15	.....
French	.12	.....	.....	.....	.30	.....	3.91
German	10.60	8.33	10.47	9.21	6.82	6.80	14.15
Japanese	24.39	34.29	40.64	42.95	46.18	45.80	10.20
Korean	.....	.....	.....	.....	.....	1.07	.24
Norwegian	7.85	4.03	4.24	1.54	6.19	7.03	11.46
Swedish	.....	.....	.....	.22	.....	1.38	1.71
Russian	.42	1.62	.60	.39	.46	1.68	.....

NIUCHWANG TOTAL COMMERCE.

It has been customary, as a rule, to present tables in haikwan taels, in which the imperial Chinese customs returns are reported. In computing the average yearly value of this tael, in the preparation of tables showing values in gold dollars, the value for the four quarters of the year have been added and divided by four. The total commerce, when given in taels, is frequently misleading. For instance, in taels the approximate volume of business transacted at the port of Niuchwang in 1903 was 48,000,000; in 1899, over 48,000,000. The fluctuation in the tael value, however, makes a difference of over $4,000,000 gold. Thus a year that shows in taels a greater aggregate than another year may, in gold dollar equivalents, as a matter of fact, make a lower grand total.

REMARKABLE SHIPPING RECORD.

In 1902 Japan's percentage of the shipping of Niuchwang was 46.13. The British carrying trade, which was 41.80 per cent of the total in 1901, dropped to 27.99 in 1902 and to 29 in 1903. In 1904, however, owing to the war with Russia, Japan dropped to 10.24 per cent, and the British returned to its former place at the head of the list, having 48.79 per cent of the total tonnage registered under its flag on that year. An inspection of the tables prepared and submitted in connection with this report show, however, that this sudden change in percentages was not due to any considerable number of additional steamers flying the British flag, as the number thus registered and calling at Niuchwang was 193 for 1901, 173 for 1902, 187 for 1903, and 195 for 1904. The remarkable changes in percentages were due mainly to the fact that in 1903 Japan's total reached the highest point in history, being 300, an increase of 2 over 1902, Japan having taken the place previously held by England in the carrying trade. The vessels represented practically a coasting business; the tables therefore show how

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insignificant is the American tonnage at Niuchwang, owing to the fact that the bulk of American goods reach this port through Japanese and Chinese shipping centers.

The following is the total number of steam and sailing vessels at Niuchwang for the years given:

Flag.	1899.	1900.	1901.	1902.	1903.	1904.
Japanese	192	160	261	298	300	41
British	173	127	193	173	187	195
German	47	40	48	44	38	58
American	1	1	10	.....	.....	.....
French	.....	.....	.....	2	.....	16
Dutch	.....	.....	.....	3	1	.....
Danish	1	.....	.....	1	2	.....
Swedish	.....	.....	1	.....	9	7
Norwegian	23	14	9	40	46	47
Russian	13	6	3	3	11	.....
Austrian	.....	1	5	.....	.....	.....
Korean	.....	.....	.....	.....	7	1
Chinese	110	24	8	80	51	39
Total steamers	560	373	538	644	652	404

There was very little change in the number of sailing vessels for the period beginning with 1899. In that year Great Britain had 12 vessels engaged in this trade and 28 in 1904. There has been practically no change in the tonnage of the other nations referred to, the only increase being Japan, which had, in 1904, 5 sailing vessels in the trade against 4 in 1899. The total number of sailing vessels in 1904 was 39 against 32 in 1899.

WAR TEMPORARILY INTERFERES.

The war with Russia temporarily suspended this steady growth in Japanese shipping. In 1898 39 of the Japanese steamers went out in ballast, thus abnormally increasing the exports for the following year when all but 7 carried away cargo. It is noticeable, also, that the Boxer war of 1900 did not interfere with the Japanese shipping business to as great an extent as was the case with other countries. During that year 107 Japanese steamers came in with cargoes and 53 in ballast. This reduced the inward cargo tonnage to 90,817. This inward cargo tonnage, however, increased steadily from 23,100 tons in 1896 to 150,383 tons in 1902. In 1903 there was a slight break in the steadily increasing total of Japanese inward tonnage when 156 steamers came in ballast as against 144 with cargo, the total inward cargo tonnage amounting to 134,017 tons. Still, in shipping as in the manufacture of cotton goods, the Japanese are profiting by experience. Their methods are improving. Many of their best navigators are with the navy, with the result that insurance has sometimes been withheld a Japanese merchantman unless an American or English master was in charge.

CONSUL SHARP, of Kobé, writes that the Kobé Chamber has addressed a memorial to the minister for agriculture and commerce at Tokyo, suggesting that official commercial agents be sent to important foreign ports in the interests of Japanese trade, it being thought that such agents would materially assist in the development of commerce.

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INDIA.

BENGAL.

BOYCOTT DECLARED.

DECLARATION AGAINST BRITISH PRODUCTS.

Consul-General Patterson, of Calcutta, India, reports a boycott has been declared against British manufactures, growing out of popular feeling against a proposed partition of territory. Mr. Patterson writes, under date of September 21:

The agitation and opposition to the partition of Bengal by the native population, and the formation of another province, under the name of "Assam and Eastern Bengal," has resulted in a combined and extensive boycott of British manufactures in Bengal. When it is remembered that the population of Bengal is about 76,000,000, nearly the population of the United States, it will be seen what an immense market there must be here, especially for cotton piece goods, the principal clothing of the natives, of which about 96 per cent comes from the United Kingdom, and of other cotton goods, and of the manufactures of iron and steel, of which about 65 per cent comes from the United Kingdom.

The receipts of cotton piece goods in Calcutta for distribution in Bengal amounted last year to about $55,000,000 and of other cotton goods to $5,000,000, and of iron and steel manufactures, including hardware, to about $5,500,000, besides the hundreds of other manufactures, a large proportion of which come from Great Britain.

By the boycott this market is now open to our manufacturers as it never was before. The representatives of several large native firms have recently been to see me and are ready and anxious to make connections with our manufacturers and exporters, and to buy from them instead of taking from the British manufacturers, as heretofore. It is a splendid opportunity for our exporters to send their agents here and to establish a large trade while the feeling exists against British manufactures.

COMMERCE OF KARACHI.

Karachi, according to Consul Fee, of Bombay, is a creation of British rule in India. It is the chief town of Sind, had 108,000 inhabitants in 1900—mostly Mohammedans and Hindoos; has an extensive, rapidly increasing trade, a splendid harbor, numerous flourishing institutions, and brilliant prospects. The extension of railroads near it and from it, giving an outlet to the vast irrigation works along the delta of the Indus, in the Punjab has made it the "gateway of central Asia." Its imports increased in a single year, 1905, from $19,000,000 to $27,000,000; its exports from $48,000,000 to $60,000,000.

IMPORTS AND EXPORTS.

The imports consist largely of cottons, woolens, and sugar; the exports of wheat, grain, hides, and land products. There was an

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expansion two years ago of the wheat-sown area in the Punjab. That is maintained; and improved railways have added an impulse to Karachi's trade which is likely to continue. Severe frosts have injured Punjab wheat this year, hence no such stride in the export trade as that recorded last year is looked for. There was a notable increase in the importations of machinery, due, doubtless, to the erection of cotton-ginning, ice, and soap factories in the interior. Over 90 per cent of Karachi's trade is with European countries, Great Britain having 60 per cent. The coasting trade is considerable. Of this Bombay has by far the largest part.

In this coast trade raw cotton and wheat figure high among imports, and cotton of Indian manufacture among the exports. The United States have a consular agency at Karachi, presided over by Mr. E. L. Rogers, who reports shipments to the United States for the year ended June 30 of $420,000, mainly hides, goatskins, and wool.

GERMAN COMMISSION.

The German Colonial Times says a commercial expert has been sent by the German Government to report on India and Ceylon. The party selected has had considerable experience as a merchant, and was for a time connected with the German consulate-general in Calcutta. The extraordinary development of the Empire's trade with India and Ceylon have long warranted such an appointment. The expert is to devote all his time and attention to the study of trade, the means of transportation, methods of marketing goods, etc. It is another step toward the practical—toward the elimination of bureaucratical methods of seeking foreign trade.

COFFEE ACREAGE.

Consul Fee, of Bombay, reports that at the close of 1904 India had 212,964 acres of land under coffee. This indicates a reduction in acreage of 13,078 acres as compared with 1903. It is noticeable, says Consul Fee, that in spite of the falling off in the amount of land planted the amount of coffee exported has constantly increased. England takes more than 20,000,000 pounds a year; France took 11,000,000 pounds in 1904. The export prices per hundredweight (112 pounds) ranged between $15.25 and $16.37 during the last five years, the highest price being paid in 1904–5.

PERSIA.

INCREASING COMMERCE.

THE UNITED STATES SHOULD HAVE GREATER SHARE.

Mr. Walter J. Ballard, of Schenectady, N. Y., furnishes the Bureau of Manufactures with facts and figures showing the commerce of Persia, based upon a consular report recently published by the French Government. The French consul uses the figures of the official year ended March 20, 1904, which are compared with those of the preceding official year. Mr. Ballard's article follows:

The recent visit of the Shah of Persia to the Emperor of Russia lends interest to a full and valuable consular report just published by

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the French Government on the foreign trade of Persia during the year ended March 20, 1904, as compared with the preceding year. The figures, in millions of krans, each worth 8.1 cents of United States coin, follow:

Country.	Imports.		Exports.	
	1902–3.	1903–4.	1902–3.	1903–4.
Russia	119.9	184.7	121.4	155.5
British Empire	101.4	128.4	18.4	21.1
France	17.8	22.0	9.2	19.1
Austria-Hungary	10.8	12.1	(a)	(a)
Turkey	8.9	10.4	19.8	35.8
Afghanistan	5.1	6.4	2.6	3.8
United States	.3	6.4	1.1	.6
Germany	2.9	5.9	.1	.2
Italy	.2	2.7	3.4	5.3
China	2.1	2.0	9.1	10.7
Other countries	4.0	4.0	1.2	2.7
Total	273.4	385.0	186.3	254.8

a No data.

Persia's 1903–4 imports and exports, classified in millions of krans, were as follows:

Imports.	Value.	Exports.	Value.
Cotton yarn and manufactures	142.1	Rice and cereals	28.3
Other textiles	31.9	Fruits	43.4
Sugar	82.9	Fish	40.2
Tea	16.9	Cotton	20.1
Gold and silver	29.7	Wool	12.1
Metals and metal wares	17.7	Carpets	22.4
Miscellaneous	63.8	Silk (cocoons)	24.6
		Opium	16.5
		Miscellaneous	47.2
Total	385.0	Total	254.8

BRITISH AND RUSSIAN RIVALRY.

It would seem as if the United States should get a larger share of Persia's import trade than 6.4 million krans, though it is encouraging that it reached that figure from 0.3 million krans in 1902–3.

A glance at the preponderating shares of Russia and Great Britain in Persia's exports, as well as her imports, demonstrates that the struggle between those two countries for influence with the Shah and his Government, and thereby control of the country's commerce, must become more pronounced and intense.

RUSSIA LEADS IN TEXTILES.

Of Persia's imports of textiles Great Britain and Russia jointly supplied 85 per cent, while Russia sent 85 per cent of the sugar imported. Carpets represent the only real manufacturing industry in Persia. All other manufactures are imported. There is where American exporters should bend their energies in the effort for a far larger share of Persia's import trade, the volume of which, over $300,000,000 a year, is surprising. Russia at present ranks easily first among the countries dealing with Persia, owing to her geographical proximity

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and the advantages she has secured under the new Persian tariff, "which," says the French consul, "has been framed especially with the view of satisfying her." These advantages gave her, in 1903–4, 48 per cent of Persia's whole import trade, and no less than 61 per cent of Persia's export trade. The British Empire follows a good second (mainly Great Britain and British India), and easily beats all other nations with 33 per cent of the import but only 8 per cent of the export, trade. In the latter she is distanced by Turkey, also by reason of proximity.

NEED OF AMERICAN SHIPS.

The supremacy of British shipping in the Persian Gulf and the proximity of India account for her high position in Persia's import trade. Outside of carpets there are very few of Persia's exports which the British Empire does not produce somewhere herself. In these two points we see our need of American ships and of the American colonies we now have. American purchases from Persia consist of a few carpets, and our sales to Persia are mainly precious metals. The Bureau of Statistics has not yet found it necessary to give Persia a name and a place in its Monthly Summary, but our trade with that country comes under "All other Asia," which heading for 1905, fiscal year, covered $15,363 imports and $164,683 exports. Still, that is just the reason why we should try for more, and the purport of this article is to show how large a commerce Persia has, and how small is our present share therein.

CHANCE FOR ENTERPRISING AMERICANS.

To the French consul's report is appended a report by M. Maulion, a French merchant of Teheran, Persia, which shows that, outside of carpet making, the country has to buy abroad about all the wares it needs, and that good openings exist for several lines of industry. Teheran, for instance, needs more electric tramways for its population of 300,000. The present short line, owned by Belgians, is doing a good business. Several industries, such as cotton spinning, gas works, glass works, and a sugar factory, have failed, owing to bad financing and bad management. In American hands results would be very different. Coal is plentiful. Railways, steam, several of them, would pay excellently well. Unfortunately Russia holds a monopoly for railway construction in Persia. Openings, and good ones, exist for chemical works, carriage works, paper mills, a brewery, pottery and porcelain factories (good clay), soap, candles, and glycerin making, and wines and spirits. All this information is important, as the investment of American capital abroad is now as important an industry with us as exporting American goods, of which, indeed, it is the forerunner.

In spite of Russia's present predominating influence in Persia, the British treaties with that country, backed by Britain's gigantic war fleets and her army next door (India), render the investment of foreign capital in Persia a safe proposition, and when the Persian tariff is changed, as it will be by British demand, Persia will be another "open door" in Asia. In the meantime American exporters can get a foothold in Persian trade by making their prices fit the present tariff, if they

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choose to try. Persia importing yearly about $130,000,000 worth of textiles, and none of it American goods, is not American. Already the Persian people are crying out against the present protective tariff, which is only protective to Russia, as Persia has no industries to protect.

ARABIA.

MOCHA COFFEE.

CONDITIONS UNDER WHICH GROWN AND SHIPPED.

Consul Masterson, of Aden, Arabia, furnishes a report on Mocha coffee which will interest all lovers of the popular beverage and surprise many who imagine that all the coffee they purchase under the label "Mocha" is the genuine article. Mr. Masterson explains the limitations upon the growth of Mocha and the care that is taken by the local authorities to prevent other coffees from being substituted and shipped from Aden as Mocha. His report follows:

I suppose of all the many kinds of coffee grown the one and only kind of all that is unable to compete with other coffees is Mocha. No matter how much greater and better the facilities are for handling and putting coffee on the market than in the past, or how much more the growers may know about the best way of raising coffee, the output of Mocha coffee remains the same, or even less, as the years go by, and until a complete revolution comes about in the way this crop is raised, handled, and marketed the output will remain the same or grow gradually less.

In favored countries, where coffee plantations are extensive, the labor cheap, and all kinds of mechanical appliances are used for hulling, cleaning, sorting, and packing, the prices are gradually growing less each year, and more coffee is coming into the market also by reason of these appliances and facilities, and as the output increases in other countries the output of Mocha coffee gradually lessens.

As Mocha coffee is now produced it is about as cheap in the market as it can well be sold, and anyone who is at all familiar with the coffee market knows that the price of Mocha coffee has varied less than any other coffee within the past ten years, and that even if the price of other coffees has gradually grown less and less, the value of Mocha has not dropped in proportion because, until conditions change, it is now as low as it can be.

RAISED BY THE ARABS.

Unlike the raising of coffee in other countries where we can, without much difficulty, know all about each crop, how much it will likely yield, and the condition of each growing crop the raising of Mocha coffee is done by Arabs out in the mountainous country of Arabia where no white man has ever been, and statisticians and crop forecasters are unknown. There are no extensive plantations out there as we know

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of them in other places, but each Arab has his own few bushes around his little house, and raises enough coffee for his own use and a little for trading for other commodities. It thus becomes a difficult and slow process to collect from hundreds of people enough to load a caravan. The markets of Aden and Hodeida are several hundred miles from where the coffee is grown, and the journey to these markets takes several weeks.

In passing through the different districts under control of some native sheik or Turkish official this coffee is always subject to a levy toll or tariff from each official. Then, when it finally reaches the seaport market, the process of finally arranging it for shipment is a slow and expensive one. It is always brought in unhulled or just as it was picked from the plant. It is first hulled by passing it between two millstones turned by hand; then it is winnowed and sorted by Indian women, each grain being carefully looked over and all the uneven or indifferent grains being taken out. Then it is ready for packing and shipping. Anyone can see that coffee raised, handled, and marketed in such a fashion can never compete with coffee raised under more favorable conditions, and it can further be seen that Mocha coffee is bound to be of a higher price and that prices are also bound to remain stationary as long as such conditions prevail.

PROTECTION AGAINST IMPOSITION.

The export of Mocha coffee from Aden for the last ten years has fluctuated in the output, but it has gradually dwindled, with an occasional recovery in some years; but, as will be seen, the output for the year 1895–96 was considerably greater than for the year 1904–5. The great falling off for the past year is easy explainable, as the bubonic plague was very bad here and many caravans were stopped on this account. This also explains the small export for the year 1900–1901, as there was also plague here during that year. There are two other causes that have contributed to the small export for last year, namely, the war between the Arabs and Turks in the Yemen, and a famine has also prevailed there during that time.

France has, with the exception of one year (1898–99), led in the importing of Mocha coffee, with the United States in the second place, followed by the United Kingdom and Germany in the order mentioned. The local government and the Aden Chamber of Commerce have taken the necessary precautions for protecting the coffee merchants in this place in their business, and no outside coffee is allowed to be transhipped from here, or in any manner is coffee allowed to be shipped from this port as Mocha unless it is the genuine article. If there is any adulterating, blending, or mixing, it is done after it leaves this port.

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AUSTRALASIA.

AUSTRALIA.

THE COMMONWEALTH'S GROWTH.

REMARKABLE PROGRESS IN TRADE—PRINCIPAL IMPORTS AND EXPORTS—RELATIONS WITH THE UNITED STATES.

The trade of Australia during 1904 is detailed by Consul-General Bray, of Melbourne. The story as told by the figures indicates a marvelous growth along certain lines. The total trade of more than $459,000,000 is enormous for a country so sparsely populated. If the present promise is fulfilled Australia has a great future in oriental trade. The report is as follows:

The total trade of the Commonwealth of Australia with other countries, for the year 1904, amounted in value to $459,933,198, consisting of $180,161,934 imports and $279,771,264 exports. This trade was distributed as follows:

	Imports therefrom.	Exports thereto.
Great Britain	$109,310,623	$134,145,072
Other British possessions	22,019,535	74,191,962
Foreign countries	48,831,776	71,434,230
Total	180,161,934	279,771,264

Among the countries grouped above as "Other British possessions" the following are the most important:

Country.	Imports ($109,310,612).	Exports ($134,145,072).	Country.	Imports ($109,310,612).	Exports ($134,145,072).
Burma	$185,876	$23,267	Malta	$1,751	$141,713
Canada	1,080,675	142,841	Mauritius	241,908	293,743
Cape Colony	29,184	6,832,732	Natal	5,071	3,318,997
Ceylon	3,168,486	34,730,945	New Guinea	396,479	237,385
Fiji	279,994	1,134,332	New Zealand	9,035,830	7,272,503
Hongkong	1,845,960	2,899,311	Ocean Island	213,113	82,541
India	4,596,071	16,259,658	Straits Settlements.	826,253	728,311

TRADE WITH FOREIGN COUNTRIES.

The trade of Australia with the principal foreign countries of the world in 1904 was as follows:

Country.	Imports.	Exports.	Country.	Imports.	Exports.
Argentine Republic	$667	$125,511	Greece	$160,594	$54
Asia Minor	50,770	195	Guam	.....	447,912
Austria	24,493	4,000	Hawaiian Islands	1,008	117,457
Belgium	3,133,899	10,781,273	Italy	866,130	660,360
Borneo	30,123	.....	Japan	2,049,541	2,828,478
Chile	50,845	1,231,390	Java	1,327,619	637,307
China	370,385	1,607,658	Kaiser Wilhelms Land	258	49,390
Cuba	39,886	.....	Marshall Islands	7,417	38,628
Denmark	3,384	29,154	Mexico	.....	64,403
Ecuador	.....	39,647	Netherlands	375,738	1,050,273
Egypt	69,499	147,363	New Britain	29,333	97,294
France	1,638,750	18,576,078	New Caledonia	144,875	692,548
Germany	12,924,719	18,205,723	New Hebrides	83,484	147,188

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Country.	Imports.	Exports.	Country.	Imports.	Exports.
Norway	$1,686,696	$34	South Sea Islands	$285,800	$430,276
Panama	.....	25,008	Spain	63,405	12,687
Peru	.....	474,941	Sumatra	150,564	5,066
Philippine Islands	247,255	1,486,495	Sweden	380,921	4,701
Portugal	41,161	.....	Switzerland	48,120	2,399
Portuguese East Africa	39	457,096	Turkey	35,048	.....
Reunion	.....	49,989	United States of America	22,346,700	10,846,665
Russia	142,938	.....			

IMPORTS AND EXPORTS.

The principal imports of Australia during 1904 are given in the annexed table:

Agricultural implements and machinery	$2,891,805	Iron and steel	$7,917,605
Ale and beer	1,770,725	Jewelry and precious stones	2,234,375
Alkalis (soda)	450,085	Lamps and lamp ware	403,765
Apparel and textiles	46,561,245	Leather and manufactures of	2,080,975
Arms, ammunition, and explosives	3,725,270	Machinery	8,372,279
Bags and sacks	2,801,075	Machine tools	354,590
Boots and shoes	1,820,515	Manures	1,435,120
Brush ware	605,640	Matches and vestas	633,435
Candles	355,865	Metals, manufactures of	9,048,565
Canvas	951,785	Milk, preserved	986,370
Carpets and carpeting	675,465	Oils	4,315,255
China ware	1,151,520	Paints and colors	1,299,875
Clocks and watches	788,260	Paper	4,778,920
Cocoa and chocolate	872,820	Plated ware	722,400
Confectionery	572,405	Railway materials	920,180
Copra	518,665	Seeds	453,920
Cordage and twines	1,275,530	Skins	534,735
Cutlery	632,820	Specie (gold, silver, and bronze)	117,765
Drugs and chemicals	4,126,245	Spirits	4,015,800
Electrical goods	947,230	Stationery	1,171,355
Fancy goods	1,323,450	Sugar	2,195,570
Fiber, flax, and hemp	729,615	Sulphur	305,330
Fish, preserved	1,499,160	Tents, tarpaulins, etc	4,347,240
Floor cloths	1,567,650	Timber	5,756,985
Fruits, preserved, etc	818,070	Tin plates	879,755
Furniture	1,036,720	Tobacco	2,710,610
Glass and glassware	1,398,735	Tools of trade	1,363,670
Gold bullion and ore	5,910,885	Turpentine	276,470
Grain and pulse	2,200,230	Varnishes	301,015
Hats and caps	2,139,380	Vehicles:	
India-rubber goods	1,196,270	Bicycles and parts	802,875
Instruments:		Motors and parts	594,480
Musical	1,447,070	Other	883,320
Scientific	715,870	Wood, manufactures of	603,035
		Wine	484,350

The principal exports, including the precious metals, were:

Bark, tanning	$469,635	Manures	$311,525
Butter	12,303,320	Meats	8,115,770
Coal	3,922,450	Oils, cocoanut and eucalyptus	885,870
Copper	8,273,805	Onions	81,175
Fodder	712,360	Ores, wolfran, bismuth, etc	841,370
Fruits, apples, etc	1,808,395	Pearl shell	1,223,395
Gold:		Silver, bullion, ore, etc	11,026,740
Bullion	27,819,325	Skins and hides	6,674,200
Specie	50,642,040	Tallow	2,750,865
Grain and pulse	31,295,960	Timber	4,139,515
Hay and chaff	140,845	Tin	3,719,310
Horses	1,118,950	Wine	500,410
Jewelry and precious stones	380,340	Wool	85,576,670
Lead	4,440,580		
Leather	1,988,625		

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TRADE WITH THE UNITED STATES.

The following list shows the principal articles imported from and exported to the United States during the same period:

IMPORTS.

Agricultural implements	$2,355,050	Leather and leather ware	$439,110
Apparel and textiles	554,565	Machinery	1,931,485
Arms, ammunition, etc	247,925	Machine tools	129,995
Blacking	66,355	Metals, manufactures of	1,542,190
Books and periodicals	90,355	Oils	2,627,145
Boots and shoes	361,115	Paints and colors	136,380
Canales	73,095	Paper	1,348,995
Clocks and watches	204,140	Plated ware	80,675
Confectionery	52,150	Rails	105,365
Cordage and twines	172,525	Resin	321,845
Drugs and chemicals	347,835	Sausage casings	127,700
Electric materials	74,970	Soap	106,615
Fancy goods	68,525	Stationery	109,875
Fish, preserved	354,945	Stone, slates	120,355
Furniture	238,355	Sugar, glucose	106,135
Glassware	138,200	Timber	2,981,350
Grain, barley	169,725	Tobacco	1,855,755
Greases	51,905	Tools of trade	583,385
India rubber manufactures	106,275	Turpentine	269,310
Iron and steel	137,190	Vehicles, bicycles, motors, etc.	435,280
Jewelry	61,115	Wax	47,190
Lamps and lamp ware	97,130	Wooden ware	320,950

EXPORTS.

Coal	$390,370	Skins and hides	$632,970
Copper	56,340	Tin	142,265
Gold specie	5,803,000	Wool	3,619,995
Oils, cocoanut and eucalyptus	40,600		

TRADE WITH THE PHILIPPINES.

The following commodities were imported from the Philippine Islands:

Articles.	Quantity.	Value.
Cordage and twine		$1,350
Fiber, flax and hemp ..... hundredweight	15,557	160,080
Hats and caps		7,045
Tobacco:		
Unmanufactured ..... pounds	10,254	2,215
Cigars ..... do	82,547	75,135
Cigarettes ..... do	410	405
All other articles		1,025
Total		247,255

Exports to the Philippines.

Articles.	Quantity.	Value.
Animals, living:		
Cattle ..... number	561	$21,360
Horses ..... do	165	19,135
Butter ..... pounds	567,081	117,130
Cheese ..... do	63,738	8,465
Coal ..... tons	205,588	593,235
Drugs and chemicals		5,375

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Exports to the Philippines—Continued.

Articles.	Quantity.	Value.
Fish:		
Frozen		$370
Preserved ..... pounds..	3,173	390
Fodder ..... hundredweight..	60,102	64,445
Fruits, fresh ..... cntl..	1,663	4,485
Grain:		
Oats ..... bushels..	6,376	2,485
Flour ..... tons..	1,163	46,740
Hay and chaff ..... hundredweight..	6,236	4,570
Lead, pig ..... do....	401	1,165
Meats, bacons, and hams ..... pounds..	43,657	9,540
Frozen—		
Beef ..... do....	7,448,649	421,435
Mutton ..... do....	749,378	48,400
Pork ..... do....	254,171	22,705
Poultry and game ..... do....		1,945
Rabbits and hares ..... pairs..	4,322	855
Other ..... pounds..	42,031	2,450
Potted		
Preserved ..... pounds..	2,273	370
Metals, manufactures of		5,585
Milk, concentrated ..... pounds..	127,752	10,505
Onions ..... hundredweight..	5,629	4,990
Potatoes ..... do....	26,461	15,555
Timber:		
Undressed ..... superficial feet..	3,855,318	119,435
Logs ..... do....	1,300	55
All other articles		23,520
Total		1,486,496

BRITISH TRADE.

REMARKABLE RESULTS HAVE BEEN RECORDED.

Trade relations between Australia and Great Britain is the subject of a report by Consul-General Bray, in which he emphasizes such features as will interest others, particularly those engaged in exporting and importing. He writes:

The imports into Australia from Great Britain during 1905 do not show an increase over last year. The imports of the principal articles of textiles and apparel from Great Britain during the half year ended June 30, 1905, amounted to $10,957,556, against $11,653,900 for the corresponding period of 1904, the quantities being as follows:

Articles.	1904.	1905.
Cotton piece goods ..... yards..	67,142,000	66,831,600
Woolens ..... do....	2,198,600	2,341,500
Worsteds ..... do....	3,741,100	3,748,000
Carpets ..... do....	490,300	467,000
Haberdashery and millinery ..... dollars..	613,091	601,348
Jute piece goods ..... yards..	1,585,200	1,555,400
Linen-piece goods ..... do....	5,697,200	4,658,600
Silk broad stuffs ..... do....	34,024	77,236
Apparel, waterproof ..... dollars..	53,755	39,176
Apparel, other ..... do....	1,881,554	1,487,051

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IMPORTS OF MINOR IMPORTANCE.

Turning to other articles, the imports of the goods in the list below for the same period amounted to a total value of $10,734,467, against $11,405,684 in 1904:

Articles.	1904.	1905.
	Quantities.	*Quantities.*
Beer and ale.....barrels..	24,556	25,832
Boots and shoes.....dozen pairs..	42,966	38,196
Paper.....hundredweight..	128,735	112,671
Cement.....tons..	9,477	8,185
Salt.....do....	8,274	13,812
Spirits.....gallons..	694,193	754,844
Oil (seed).....tons..	2,929	1,796
Iron—bars, rods, angles, etc.....do....	12,095	12,185
Cast iron and manufactures.....do....	1,630	1,312
Wrought iron and manufactures.....do....	1,836	1,666
Rails.....do....	5,761	9,062
Railroad iron and steel (unenumerated).....do....	1,078	1,376
Wire and wire manufactures.....do....	4,367	7,609
Galvanized iron.....do....	27,236	24,493
Tin plates.....do....	7,777	6,706
Hoops and strips.....do....	1,457	1,025
Tubes and pipes, and fittings.....do....	6,316	7,584
Steel bars, angles, rods, and shapes or sections.....do....	4,131	3,919
Manufactures of steel or of steel and iron (unenumerated).....do....	619	623
Copper, wrought or manufactures.....do....	525	362
	Values.	*Values.*
Cutlery	$244,752	$247,072
Hardware	149,270	149,796
Locomotives	219,138	76,422
Steam engines, agricultural	88,322	48,884
Other steam engines	380,055	310,365
Agricultural machinery	169,827	56,213
Other machinery	1,236,467	1,179,444
Saddlery and harness	192,766	184,610
Chinaware and earthenware	367,152	381,889
Stationery	283,668	273,239

EXPORTS.

The exports from Australia to Great Britain during the half year, on the other hand, show a considerable increase over the same period of last year, the total value of fifteen principal articles of merchandise being $63,732,818, against $52,440,960, or an increase of $11,291,858. This increase is principally accounted for by wool, wheat, and frozen mutton and lamb. The following is a statement of the quantities of the principal articles exported from Australia to Great Britain during the first six months of 1904 and 1905:

Articles.	1904.	1905.
Wheat.....hundredweight..	3,595,800	5,781,280
Beef.....do....	30,746	4,185
Mutton and lamb.....do....	58,492	294,040
Rabbits.....do....	50,466	101,216
Butter.....do....	286,307	275,235
Wine.....gallons..	319,467	407,280
Wool.....pounds..	152,266,492	167,929,729
Tallow.....hundredweight..	243,139	282,554
Hides, wet.....do....	2,234	2,118
Sheepskins.....number..	1,016,376	1,548,501
Copper ore.....tons..	1,026	2,643
Copper.....do....	5,735	5,088
Lead.....do....	35,582	39,431
Tin.....do....	1,941	1,728
Leather.....hundredweight..	39,100	26,759

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ENGLAND ALARMED.

DECLINE IN BRITISH INFLUENCE.

In a subsequent report dealing with the competitors of Great Britain in the markets of Australia, Consul-General Bray quotes the words of Mr. R. J. Jaffray, who was sent to Australia by the British Board of Trade for the express purpose of investigating conditions in that country with a view to their publication in England. The report deals with the increase of foreign traders in Australia and the decrease of British influence, and enters upon an explanation based upon opinions gathered in all parts of the country. The report follows:

Mr. R. J. Jaffray, the commissioner appointed to Australia by the British Board of Trade to investigate and report upon foreign competition with Great Britain in Australia, has given publicity to the following statements on the subject:

"I have prepared a circular in which I have endeavored to outline the scope of my inquiry. But before I quote it, let me say that a competent statistical authority expressed the opinion that the first memorandum respecting Australian imports which I wrote might be vitiated by the fact that the period which I took covers the year 1893, when the great financial crisis occurred, and the years 1904–5, the statistical information for which is 'not at all reliable.' I have, therefore, grouped the official figures, from 1871 to 1890, in four terms of five years each. The object of the comparison is to exhibit as comprehensively as possible the gradually enlarging increment of foreign imports, involving a displacement, or a reduction, in the ratio of the imports from the United Kingdom. First, taking a period of twenty years in four quinquenniums, the figures read:

Years.	Great Britain.	British possessions.	Foreign countries.
1871–1875	£75,568,020	£19,924,188	£13,491,699
1876–1880	89,020,970	18,327,973	15,766,484
1881–1885	128,073,941	22,491,217	24,066,365
1886–1890	122,729,684	21,329,451	28,849,366

"To put the position in a clearer light, I have worked out the annual averages of these periods so that the relative increases of trade may be seen at a glance, expressed in percentages of totals.

Years.	Great Britain.	British possessions.	Foreign countries.
1871–1875	69.4	18.3	12.3
1876–1880	72.3	14.9	12.8
1881–1885	73.3	12.9	13.8
1886–1890	71	12.3	16.7

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"A third table shows the effect of foreign competition on British imports into Australia during the last fourteen years.

Years.	Great Britain.	British possessions.	Foreign countries.
1891	70.1	11.5	18.4
1892	70.7	11.4	17.8
1893	72.8	12.1	15.1
1894	72	12	16
1895	71.6	11.4	17
1896	68.3	10.7	21
1897	66.2	10.7	23.1
1898	66.7	10.8	22.5
1899	61.8	11.8	26.4
1900	61.3	11.3	27.4
1901	59.5	11.2	29.3
1902	58.6	13.2	28.2
1903	52.5	13.2	34.3
1904	60.7	13.2	27.1

REASONS FOR THE INCREASE.

"In order to discover the reasons for this increase in foreign trade I am asking merchants for information on the following points:

"1. Confirmation or modification of the data which, as stated, show the relative decrease of imports from the United Kingdom as compared with foreign countries, and notes as to any features of the increase in recent years, or at present, of foreign competition, and whether the increase is now slackening or not.

"2. Examination of the various causes which are considered to operate in favor of the relative increase of imports from foreign countries.

"3. Consideration of the question whether, and in what way, the tendency to the stated relative increase of imports from foreign countries can be checked, and the natural course of trade with the United Kingdom restored and maintained.

"There is, I find, a consensus of opinion among the business men with whom I have had conversations, both here and elsewhere, that the diversion or displacement of trade from the United Kingdom is largely due to what may be described in various phrases, but all tending to the same general effect, namely, a want of readiness on the part of British manufacturers to introduce modifications in regard to the goods supplied, in accordance with the wishes of the people of Australia; whereas the disposition and policy of competing foreign manufacturers are conspicuously the reverse. If universal testimony by the importers here, who have to study the requirements of the consumers, is not to be rejected, it is impossible to doubt that what I have thus briefly stated has been, and is, a very strongly operative cause in producing the diversion and displacement to which all the statistics, public and private, testify as an outstanding fact. Indeed, as you are aware, the evidence which I received in England in many quarters was to the same effect. It is premature to dwell upon this unfavorable record at present, but I refer to it here because the allegations in support of it are everywhere—and always very emphatic—volunteered without the slightest hesitation. The collation of particulars in which I am engaged will, I have no doubt, corroborate this."

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COMMERCIAL BUREAUS RECOMMENDED.

Mr. Jaffray is in favor of the establishment of a commercial bureau in each State of the Commonwealth, corresponding in constitution and functions with the intelligence department of the English board of trade. "Bring about in each State the existence of a similar body," he states, "and you get the material for a complete imperial federation of trade. Each institution would be a depot of knowledge of local conditions of trade, which could be reticulated throughout the Empire. The expense of the new department would be borne by the local government of each colony for whose advantage it existed, and there could in no case be any claim on the mother country for contribution, since the cost of the marine defense of the trade of the Empire is more than proportionate exchange for the benefits which she should secure."

CORN SACKS.

CONDITIONS GOVERNING IMPORTATION.

Consul-General Bray sends the following proclamation concerning corn sacks imported into Australia:

Whereas by the customs act of 1901 it is enacted that all goods the importation of which may be prohibited by proclamation are prohibited imports, and that the power of prohibiting the importation of goods shall authorize prohibition subject to any specified condition or restriction, and that goods imported contrary to any such condition or restriction shall be prohibited imports; and whereas by a proclamation dated the 19th day of May, 1905, and published in the Gazette on the 27th day of May, 1905, it was proclaimed that from and after the 1st day of September, 1905, the importation of corn sacks into Australia should be prohibited unless each corn sack was plainly branded or marked with its trade name, its measurement, weight, porter, and shot; and whereas it is desirable to revoke the said proclamation and to make this proclamation in lieu thereof: Now therefore, I, Henry Stafford, Baron Northcote, the governor-general aforesaid, acting with the advice of the federal executive council, do hereby revoke the said proclamation, and do hereby proclaim that from and after the 1st day of September, 1905, the importation of corn sacks into Australia shall be subject to the following conditions and restrictions, namely: That in the case of standard corn sacks—that is, corn sacks which comply with the standard hereinafter set out—the bales containing those corn sacks shall be plainly branded or marked with the trade name, measurement, weight, porter, and shot of the corn sacks therein contained; and that in the case of corn sacks other than standard corn sacks each corn sack shall be plainly branded or marked with its trade name, if any, its measurement, weight, porter, and shot. And I hereby declare that the standard for standard corn sacks shall be as follows: Size, 44 inches by 26½ inches; weight when baled, 2¾ pounds; substance, 8 porter, 9 shot. And I declare that the importation of corn sacks into Australia contrary to the conditions and restrictions contained in this proclamation shall be prohibited.

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TASMANIA.

DESCRIPTION OF THE ISLAND.

Consul Harris, of Chemnitz, Germany, furnishes an interesting article on the island of Tasmania, lying a few miles off the southern coast of Australia. The information is derived from the latest publications issued by the Tasmanian government, and may be useful to American manufacturers and merchants. The consul writes:

The latest publications issued by the Tasmanian government for the benefit of those interested in her future contain some very interesting information. A concise statement of some of the facts concerning this country can not fail to be useful to American merchants and manufacturers, for the development of so small a colony even as Tasmania may offer them some opportunity of winning new markets. Tasmania is probably the most neglected, while at the same time one of the most attractive of all the British Australasian colonies. Its total area contains 16,778,000 acres, of which one-fourth only has been alienated. There are still 11,822,450 acres in the island, generally speaking, whose forests have never heard the ring of the woodsman's ax, or whose sod has been upturned by the farmer's plow. This island with its virgin soil and healthful climate will ultimately play an important part in the world's commerce for the reason that its location, although isolated, is still sufficiently favorable to secure a commanding position in the trade of Australasia and the islands of the Pacific.

NATURAL ADVANTAGES.

The climate is healthy and congenial. The winters are warmer than those of England, and snow seldom falls except at high altitudes. The summers are hot, although less oppressive than those in Australia, and the air is dry and rarely sultry. The rainfall varies greatly at different seasons of the year. On the north coast it is from 18 to 30 inches. The west and south coasts are always very wet. On the whole the climate of Tasmania is so pleasant that many people in Australia go there every year to escape the heat and dust of the continent. The central parts of the island are at an elevation of 1,000 to 3,000 feet, and it is easy to get a considerable change of climate by traveling a short distance. Upon these upland districts are large lakes which feed waterfalls and swift running streams which are destined one day to be a source of vast wealth for industrial purposes.

Tasmania is nearly as large as Ireland, and is divided into eighteen counties. The island abounds in good timber, and the lands are excellent for agricultural purposes. Some parts are heavily timbered with good and merchantable wood, and minerals and ores are found in the upland district. Dorsey County contains some valuable gold and tin mines which are being worked with profit. Launceston, the chief town in northern Tasmania, is connected by a direct line of steamers with Melbourne and Sydney. On the west coast the country is broken with high mountains and traveling is impracticable. These difficulties, however, are being overcome by an extension of railways and by building roadways through primeval forests.

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FUTURE FIELDS FOR TRADE.

Situated near to Tasmania are a number of islands which will ultimately become important as trade increases with the continent of Australia. Hunters Islands are unsuited for agriculture, but are capable of maintaining sheep, cattle, and horses. The rocks about the coast abound with crawfish, and the deep-sea fishing is excellent. The timber is practically of no commercial value. Flinders Islands are valuable for their fishing industries, which is the chief occupation of the inhabitants. The soil is not suited for either agriculture or pastural purposes. Kings Island is the most important of the group, and is densely covered with blue gum, blackwood, and sassafras. The island is well watered, and settlement has been increasing during the past few years.

It will be seen, therefore, that this little island far away in the South Pacific contains much which is worthy the notice of the merchant and manufacturer. The land of Van Dieman and Tasman has a soil which is of good average fertility. It is favorable to the cultivation of cereals, fruit trees, and plants. Under the surface are hidden large deposits of gold, silver, and coal. Large areas of the country are devoted to hop growing. The agriculture of Tasmania, generally speaking, has not yet passed the tentative period, for the reason that the farmers are not compelled to bestow upon the soil that conservative care which characterizes the methods of older countries. Unquestionably the country has a commercial and industrial future, and the material development of the island will create a demand for mining and sawmill machinery of every description, as well as agricultural implements and household utensils. Tasmania is a field for American manufacturers.

Decrease in Freight Charges.

Consul-General Guenther, of Frankfort, writes on authority of German newspapers that hereafter freight for 110 pounds of butter from Melbourne to London will be only about 90 cents. Three large steamship companies have now reduced the freight rates on this article, and it is therefore expected that the exports of Australian butter will increase considerably. Modern means for preserving food articles have resulted in now shipping over long distances such articles as are especially scrutinized by the public as to freshness. Eggs are being shipped in barrels so prepared that they keep for almost any time. Butter is also rendered to keep fresh for a long time, and at London butter is now sold which comes from Canada, Siberia, Australia, and even from New Zealand. The exports of butter from Melbourne to London commenced a few years ago, and last year amounted to 12,000 tons.

THE FOLLOWING decree has been issued by the Australian Government:

On and after November 1, 1905, duty is to be charged on post cards, leaflets, and other advertising matter imported in magazines and other periodicals, even though gummed, sewn, or otherwise fastened thereto. The rate of duty is 6 cents per pound.

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AFRICA.

TUNIS.

A NEGLECTED MARKET.

OPPORTUNITY TO INCREASE AMERICAN TRADE—OPENING FOR MACHINERY AND COTTON GOODS.

Consul-General Skinner, of Marseille, France, sends a valuable report, prepared by Vice-Consul Proux, of Tunis, which deals with the trade conditions in northern Africa, and which conclusively shows excellent opportunities for extending American trade in those parts. The report will repay careful perusal and consideration. It is just such a picture of trade possibilities as business men need to awaken intelligent and active interest. The report, with preliminary remarks by Consul-General Skinner, follows:

Some weeks ago I requested the American vice-consul at Tunis, Mr. Auguste J. Proux, to prepare the report in regard to certain phases of Tunisian trade and commerce which appears below. Special attention should be given to the fact that in an old market, one easily accessible from Europe and frequently visited by American travelers of the tourist class, our exporters of cotton goods have not yet succeeded in supplying any part of the imports under this head, valued last year at $1,853,884. That the 5 per cent import duty was not responsible for this circumstance is shown by the relatively slight importance of free imports from France, valued at $405,582. If there is one article which American manufacturers should be better able to export successfully than any other it is cotton fabrics; but I have not been able to discover, after an observation and correspondence of several years, that American manufacturers have taken any steps whatever to extend their trade in the Mediterranean countries. Broadly speaking, foreign buyers who desire American cotton goods must go to New York and buy for themselves or employ some commission firm to do it.

FARM MACHINERY AND TOOLS.

Successful manufacturers and exporters of farm machinery, machine tools, and various other articles establish agencies and depots abroad, and they seek business by every legitimate means. Cotton manufacturers not only make no effort to do business abroad, but discourage the efforts of foreign buyers who seek them out. There seems to be little or no appreciation of the importance of the personal element in foreign business, of the desirability of close contact with consuming markets. It has taken almost two years and reams of correspondence before one Abyssinian concern of my acquaintance has been able to buy its first lot of American sheetings in New York through a commission firm. In the meantime Indian, Italian, and German firms have been seeking their business directly, and to some extent have succeeded.

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INDIFFERENCE OF COTTON MANUFACTURERS.

If cotton manufacturers are satisfied with their present selling organization, outsiders have no occasion to be troubled about the matter; but in view of the indifference of those who should be directly interested to efforts made in their behalf to extend present markets and find new ones, it is somewhat surprising to discover in their trade journals complaints in regard to lack of detailed information concerning foreign markets. "Expert commissions" are not likely to increase the export trade in cotton goods if manufacturers of these goods are unwilling to bestir themselves. Vice-Consul Proux's report follows:

REPORT OF VICE-CONSUL PROUX.

RELATIONS OF THE UNITED STATES WITH TUNIS.

By our treaty with the French Republic, dated March 15, 1904, we renounced all privileges granted us by the treaties with the Bey of Tunis, dated August, 1797, and February, 1824, and agreed only to claim those which arise from international rights and those acquired by virtue of the treaties in force between our Government and that of the French Republic. Our position is therefore that of the most-favored nation, barring the treatment accorded to France, the protecting power. Similar arrangements had been made with foreign powers who had previous treaties with the Bey of Tunis, so that now the position between France and all interested nations as regards Tunis is such that a differential treatment can be and has been established in favor of French and Algerian goods.

Attention must however be called to the conventions for a limited period of time with Italy and Great Britain. The former was signed on September 28, 1896, and was to expire January 1, 1905, though by one of its articles it is provided that in case of failure to renew the treaty the same shall be operative for a further period of twelve months. A new arrangement, provisional or definitive, will have to be made, but in any event I think it unlikely that any commercial advantages will accrue to Italy from a fresh treaty or convention. It must be admitted that foreign powers have one by one renounced their claims in Tunis, and given the French Republic a free hand. The main commercial advantage at present in favor of Italy concerns the right of fishing in Tunisian waters. It is nevertheless well to bear in mind that in view of the clause affording most-favored nation treatment, we are in a certain degree interested in any agreement between France and Italy as regards Tunis.

TREATIES WITH FRANCE AND ENGLAND.

The convention between France and Great Britain dated September 18, 1897, provides specially for the most-favored-nation treatment, with the condition, however, that Great Britain shall not be entitled to claim for herself the treatment accorded to France. It is to be noted that a special clause fixes the duty on British cotton goods at 5 per cent ad valorem. This convention with Great Britain is valid until December 31, 1912, and thereafter until six months have elapsed from time of notification of intention to denounce on the part of either of the high contracting parties. The advantages granted to French and

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Algerian goods are fixed by a decree of the Bey dated May 2, 18 98. It declares a large number of French and Algerian goods free from duty, among them cotton goods, machinery of all kinds, and tools.

I give below a list of articles imported, with the amount of duty paid on same, under the provisions of the general customs tariff dated May 2, 1898:

Cotton goods.—French and Algerian: Exempt from duty, under decree of May 2, 1898.

British: Five per cent ad valorem, as per convention of September, 1897.

Other: Five per cent ad valorem, under general customs tariff or by virtue of most-favored-nation clause.

Machinery and tools.—French and Algerian of all kinds: Exempt, decree May 2, 1898.

Foreign, if special to agriculture, i. e., of no other use: Exempt, under general customs tariff.

Other machines for agriculture, boilers and motors excepted: $1.737 per 220 pounds net.

Locomotives: Broad gauge, $1.93 per 220 pounds net; narrow gauge, $2.31 per 220 pounds net.

Tenders: Broad gauge, $2.89 per 220 pounds net; narrow gauge, $3.47 per 220 pounds net.

Foreign, fixed material for railways: $1.93 per 220 pounds net.

Boilers: Tubeless, $1.73 per 220 pounds net; tubular or semitubular, $2.70 per 220 pounds net.

Rails: $1.16 per 220 pounds net.

Tools, other than those special to agriculture: Made of iron, $2.31 per 220 pounds net; if of steel, or iron recharged with steel, $4.24 per 220 pounds net; copper, $5.79 per 220 pounds net.

The articles classed in the above list as "Foreign machinery" special to agriculture, and exempt from duty for that reason, have been enumerated in a list attached to decrees issued during the last few years, which however I have been unable to procure from the director of customs. I have therefore simply condensed the numerous items as "special to agricultre," i. e., of no use for other purposes, this being the spirit which pervades the rule. A copy of the customs tariff can be purchased at a cost of 2 francs (38 cents).

PROSPECTS FOR AMERICAN TRADE.

Cotton goods take a high place amongst imported merchandise, and there is a good opening in this line for American enterprise, if our manufacturers can successfully compete in prices and qualities with the Manchester firms. The natives, like all Eastern people, use cotton goods largely for their garments, and a trade of considerable importance has been created in what are known as "Manchester goods." Certain marks have become popular, and are in special demand among middlemen, who are willing to pay even slightly higher prices therefor. The Arab consumers are always cautious buyers, being particularly fearful of being deceived over the transaction.

HANDLING COTTON GOODS.

The trade in cotton goods is handled by Jewish merchants. Some of the largest of these importers have close connections in this country,

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of which, moreover, they possess an intimate knowledge, being indeed natives. The Manchester firms are well posted as to Tunisian customs and business ways, and accordingly show great confidence in the local dealers. Whether American manufacturers could show themselves as generous in the matter of credit remains to be seen, in view of their great distance from the market and almost complete absence of experience in this country. Some Manchester firms do not hesitate to give credit up to $20,000 on current accounts, i. e., payments to be made as sales proceed, instead of by drafts at fixed date. (I do not refer to goods on consignment, but to goods charged for on delivery.) The manufacturers become sole providers to these really small concerns, of which they are materially if not nominally sleeping partners. It is a case of money locked up.

SUGGESTIONS TO MANUFACTURERS.

General trade terms are four months' credit. The renewal of bills is frequent, since traders have to wait for payment from the natives. These latter are mostly of the agricultural class, and are often unable to meet promptly their engagements by reason of the uncertainty of the harvests. Taken as a whole, the people are fairly honest, and even the nomadic Arabs honorably redeem their bonds ("adelas"), though it must be admitted that there is a certain laxity about "due dates." I think, however, that with some discrimination a fair start might be made if our manufacturers could supply a suitable price.

From experience, I would suggest the adoption of "design" trademarks in preference to initials, words, or mottoes for goods intended for this market. Most of the natives are unable to read our type of letters, and a simple design (a camel, an elephant, a lion, etc.), bearing in mind, of course, that it should not imitate an established mark, would have a good chance in this market when it once became known. The following is a list of the sources of supply of cotton goods, with corresponding quantities, for the year 1904:

TUNISIAN COTTON IMPORTS.

During 1904 Tunis imported the following cotton goods:

Country.	Unbleached.		Bleached.		Dyed or printed.		All others.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
England	2,013,486	$315,523	2,372,392	$510,710	655,921	$192,660	51,229	$12,504	5,093,028	$1,081,397
France	71,705	14,909	482,882	128,825	534,297	173,581	258,734	88,265	1,347,618	405,580
Algeria									340,821	120,754
Italy	42,772	7,833	91,774	19,419	245,209	62,109	129,127	35,676	508,882	125,037
Belgium			74,668	17,862	152,220	38,101	142,107	21,728	368,995	77,691
Germany									78,121	28,608
Spain									60,387	15,808
Turkey									28,195	8,827
Tripoli									24,405	10,392
Switzerland									23,585	10,275
Austria									15,007	5,360
Malta									10,491	2,228
Egypt									5,390	2,974
British India									5,332	8,953
Total									7,910,257	1,853,884

It appears from the foregoing table that Great Britain supplies 64 per cent, France and Algeria 21 per cent, the United States 0 per cent, and other countries 15 per cent. As regards value the proportions

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are: Great Britain 55 per cent, France and Algeria 28 per cent, the United States 0 per cent, and other countries 17 per cent. From these data it will be seen that in spite of the preferential treatment accorded to French cotton goods, the British manufacturers are able to hold their own in the regency. Can our manufacturers do as well as the Manchester people? It is for them to solve that part of the problem.

MACHINERY AND TOOLS.

The mines open a field for the sale of tools and machinery. Several important concessions have been granted of late, and they will lead to the opening of new railway lines, entailing the purchase of much material. The concession of Ain Moulares (phosphates) has led to the planning of a railway for which $3,088,000 will be expended abroad. Several other lines are projected. The work of conducting the water supply to the city of Soussa, now being executed, brought into use 31 miles of portative railway material. In Tunis a railway line of 11 miles is to be transformed shortly into an electric tram line. I am unable to decide whether our industrials can compete successfully, but I can not avoid pointing out that no attempt is being made in that direction. In my opinion it would be advisable for interested parties to give to a qualified resident of the country a watching brief on their behalf.

AGRICULTURAL MACHINERY AND HARDWARE.

This is a most interesting branch for American trade. Even now it stands first among American imports, but there is more to be done. The French colonists, in spite of the hardships and difficulties with which they are confronted (of which the lack of water for the crops is the greatest), are gradually increasing their plantations. Their methods of operation are scientific and in striking comparison with those of the Arabs, whose conception of agriculture is of the crudest.

WINDMILLS AND PLOWS.

American windmills for the elevation of water from wells have been the most successful in the market, one mark having especially made its way, several hundred having been sold. Plows require attention from our manufacturers. Those employed by the Arabs are of the simplest description and merely succeed in scratching the soil. As the land often remains for long periods without rain the sowing just beneath the surface of the ground frequently proves fruitless. To encourage the use of European and American plows the Government grants to the natives employing them a remittance of one-tenth of their taxes. Nevertheless, cheapness, lightness, and the ease with which it can be repaired make the old-fashioned plow the favorite still. Could our makers supply a cheap, strong, and simple plow I believe that it would find a large sale. The machines required are for oats, barley, and wheat. American, French, Canadian, German, and English marks are all competing at the present time.

HARDWARE.

There is a fair trade in hardware, in which, however, Americans do not hold the place they should have. The appointment of commission

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agents would be advisable. Passing travelers have small chance against the local, permanent agents, who are on friendly terms with dealers. The following table shows imports of machinery, tools, and all articles in metal (jewelry excepted) during the year 1904:

IMPORTS OF MACHINERY.

The following table shows the amounts and values (weight in pounds and value in dollars) of the machines, etc., imported by Tunis during 1904:

Country.	Tools and articles in metal.		Machinery.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
France	18,005,657	$567,041	7,583,566	$526,498	25,589,223	$1,093,539
Algeria	741,445	32,392	514,334	63,457	1,255,779	95,849
England	197,581	14,149	1,131,057	138,729	1,328,638	152,878
United States	19,154	6,421	1,086,908	121,449	1,106,062	127,870
Germany	305,490	38,011	155,028	14,077	460,518	52,088
Belgium	373,844	10,547	83,299	4,471	457,143	15,018
Italy	99,265	8,971	362,160	29,188	461,425	38,159
Austria	69,460	10,116	39,585	2,499	109,045	12,615
Turkey	33,382	5,226	.....	.....	33,382	5,226
Switzerland	2,870	303	95,170	13,806	98,040	14,109
Tripoli	9,790	1,302	.....	.....	9,790	1,302
Holland	.....	.....	2,620	655	2,620	655
Sweden	2,561	654	.....	.....	2,561	654
Russia	2,446	81	.....	.....	2,446	81
Norway	268	112	.....	.....	268	112
Malta	.....	.....	.....	.....	5,978	890
Greece	.....	.....	.....	.....	1,867	214

From the foregoing statistics it will be seen that while France almost monopolizes the supply of machines and all metal articles, yet some branches are left open to foreign industry, and it is for American manufacturers to see, after a study of the tariffs, if they are in a position to compete. Small as may be the field open to foreign iron and steel works, I would point out that articles in metal form the largest imports from Germany; they stand fourth in those from Austria. I am convinced that some effort should be made to develop this branch of our commercial activity, and I shall be glad to further any attempt made in this direction.

BUSINESS HOUSES IN TUNIS.

I inclose, as requested, a small list of Tunisian business houses with whom American firms can correspond with a view to increasing trade relations:

Sadik Frères, cotton goods, Tunis and Sousse.
Haim d'Abraham Sadik, cotton goods, Tunis.
A. Haddad et Fils, cotton goods, Tunis and Sfax.
M. de D. Nataf, cotton goods, Tunis.
Sal. de S. Hayar, cottons, Tunis.
Pellet Azeron, hardware, Tunis, Sfax, and Bizerta.
Pellet Azerm & Tarrenni, agricultural machinery, Tunis.
Durieux et Revolun, hardware, Tunis.
R. & G. de Matteis, hardware, Tunis.
Pilter, Th., agricultural machinery, Tunis.
Moise de B. Enriquez, tanners, goatskin exporters, Tunis.

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Sebah et Bernheim, tanners, Tunis.
H. & M. Lellouche Frères, tanners, Tunis.
E. de G. Lusca, tanners, Tunis.
Les Fils de Simon Nahum, general, skins, pampa grass, Tunis.
Giuseppe de D. Enriquez, leather exporter, Tunis.
J. Bellissen, general, Rue de Vesoul, Tunis.
D. Germoneau, hardware, 25 Avenue de Carthage, Tunis.
Felce et Boullier, general, 5 Rue St. Jean, Tunis.
Joseph Forti, general, 14 Rue des Glacières, Tunis.
Medina Frères, general, 6 Rue d'Oran, Tunis.
P. Leclercq, agricultural machines, Rue Es Sadikia, Tunis.

TUNISIAN TRADE.

MOVEMENT FORWARD SLOW BUT SURE.

The following outline of Tunisian trade is from Consul Grout, of Valetta, Malta. It deals with the larger lines of the Tunisian imports and exports, giving the relative positions of the parties participating in the trade, and suggests possibilities for United States manufacturers and merchants. There was a slight falling off in imports during 1904, and a $10,557,000 increase in exports. The consul writes:

Some months ago I presented a report showing that during the past ten years, including 1903, the trade and population of Tunis had doubled. From statistics recently received from that port it would appear that the general trade of Tunis for the year 1904 shows a slight improvement over the previous year. The value of imports slightly decreased, while that of exports increased to the extent of $10,557,305. There was a decrease in exports of wheat, but a gain in the matter of phosphates and zinc ore. The year proved very favorable for the tunny fisheries and production of olive oil. On account of increased local demand for cattle, prices were such that more were retained for sale and consumption within the regency, and less numbers were exported than during the previous year. The imports of machinery, cotton goods, petroleum, and other articles increased to an extent that partly compensated for the falling off in wheat. Imports from France, Algeria, Italy, and Belgium increased, while those from England and a few other countries fell off. Cotton fabrics from England fell off largely. The credit system of Tunis is one that needs study, one authority stating that at present it seems to be arranged upon a rather elastic basis. Coal imports also fell off.

INCREASE OF TONNAGE.

The effective tonnage that entered and cleared at all Tunisian ports showed an increase of 5 per cent. That of the port of Sfax shows an increase of over 100,000 tons over the port of Tunis. The combined export and import trade with France shows an increase over the previous year of 12 per cent, Norway 47 per cent, Greece 14 per cent. Trade with Germany decreased 18 per cent. Strikes at Marseille were the cause of fewer vessels under the French flag entering and clearing. Exportations to France show an increase of 140 per cent over importations from that country; those to Italy and England,

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179 per cent more than the imports from those countries. Coasting trade decreased 10 per cent. Of this trade, 53 per cent was under the Tunisian flag, 30 per cent under the Italian flag, and 17 per cent under the French flag. Again, of this trade, 29 per cent was by steamers and 71 per cent by sailing vessels. Passenger traffic increased 3 per cent over the previous year. Importations of live stock shows an increase of 192 per cent; exportations, a decrease of 70 per cent. Exports of sheep fell to 123,000 in 1903, and 31,300 in 1904. Bad weather adversely affected the sardine fisheries. That of anchovies, on the contrary, was good. The result of the tunny fisheries reached 2,500,000 kilograms, a figure not attained for many years past. The sponge fisheries remain at about the same point as stated for 1903.

FIELD FOR AMERICAN GOODS.

As pointed out in a previous report, there is a good field for many lines of our goods at Tunis, which should be taken advantage of. The goods of American origin now to be found there for sale are there merely because the Tunisian buyer has taken the initiative and not on account of any particular exertion on the part of American houses. This is a field that should be visited by the personal representatives of American houses. Printed matter should not be depended upon. Extensive local improvements are still being carried on, much money is being spent by the local government, and it will not be many years before Tunis will become a very important port in the Mediterranean. Recently much attention has been given to the milling industry there; and I am informed, on good authority, that the erection of new mills is either in process or under contemplation. The matter of direct transportation from New York and other American ports should prove no obstacle. Once the orders for goods are obtained the matter of transportation will easily settle itself.

ALGERIA.

COTTON CULTIVATION.

RESULTS OF RECENT EXPERIMENTS.

In a report covering the work of his district, Consul Johnston, of Algiers, refers to the possibilities of raising cotton in that part of the world. He gives the exports of cotton for a series of years, those from 1860 to 1875, which indicate a curious up and down movement, from 99 metric tons in 1860 to 75 tons in 1875, 744 in 1866, 377 in 1868, 282 in 1869. After 1875 prices ceased to be remunerative; hence the people turned to tobacco, grapes, etc., in which, on account of the phylloxera in France, they made considerable money. On a single hectare, or an area below 2½ acres, as much as $400 has been made raising grapes.

A hope and belief is gaining ground that cotton is certain in the near future, with the rapidly increasing demand caused by industrial growth, to be raised again on the Algerian plantations. It is thought that the experiments made in the years of famine prices were not carried out as carefully as they could and should have been. The French Association Cotonnière is doing all it can to encourage the cultivation of cotton in French and other colonies. It has distributed seeds and sought in other ways to get the people in Algeria and elsewhere to

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experiment along lines known to have secured good results elsewhere. Some of the results have reached points said to be satisfactory. Experts examined cotton cultivated and found it to range in value from $9.07 to $9.26 for short, $13.51 to $15.44 for medium, and $28.95 to $38.60 for long per 220 pounds. The yield per hectare (2.47 acres) was approximately 3 metric tons of short, 2 of medium, and 1½ of long. The cost of labor per hectare was about $58, the profit about the same.

ABYSSINIA.

FIELD FOR FUTURE WORK.

URGENT NECESSITY FOR RAILROAD CONSTRUCTION—OBSTACLES TO AMERICAN TRADE.

Consul-General Skinner, of Marseille, France, writing to the Engineering News, in reply to the query, Why have not Americans made use of their opportunities in Ethiopia? gives some information about Abyssinia that is of general interest. He says nothing will be done in Ethiopia till the railroad replaces the camel. There is no demand at present for machinery, but Mr. Skinner urges American merchants and manufacturers to watch the wonderful country presided over by the Negus. The report follows:

The Engineering News Publishing Company asks me why "the Americans have not made use of the opportunity that you had so much to do in opening for them in Ethiopia," to which I reply that an inadequate commercial organization in the United States and the non-completion of the trans-Ethiopian railroad have both contributed to a practically stationary state of affairs.

I assume that my inquirers refer to ordinary commercial transactions and not to development enterprises. In the actual State of Ethiopia the principal business consists in exchanging American cotton sheetings for a few natural products. The importation of these sheetings was, a few years ago, a monopoly conceded by the Government to one favored firm, but it is now open to anybody. Owing to the many middlemen through whom our sheetings pass, the retail prices are high, and consumption is limited; in the meantime, American manufacturers are organized to sell to intermediaries only; they are so highly organized, in fact, that it took Mohamedally & Co., a responsible concern, over one year to find an American firm willing to sell American goods for cash, on terms as low as those for which they could obtain these same goods from their competitors in Aden. In spite of discouragements of this kind, some direct business has resulted, not only in cotton goods but in a number of other lines.

While a more active practical interest in export trade on the part of American manufacturers is highly desirable, no very extraordinary results are to be expected in Ethiopia under any circumstances, until the camel is replaced by the railroad. At present a line from the coast to the frontier is in operation, but it can not do very much until it is extended across the Empire, a project which has been thwarted until now by the rival political interests of France, England, and Italy. I am informed that capital is ready to undertake the construction, and

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that a political understanding is on the eve of being realized. In the meantime the Europeans now in the country have alternate periods of optimism and pessimism, according to the political barometer.

GUARANTEE FOR AMERICAN TRADE.

My correspondents, like many other people, labor under the erroneous impression that I visited Ethiopia in 1903–4 to seek "opportunities for developing trade." While I hold that to be one of the chief aims of American officers abroad, under all circumstances, it was only true in a secondary sense as regards the Ethiopian mission. The United States had at that time, and I hope always shall have, the greatest and most valuable import trade in Ethiopia. It seemed not impossible in 1903 that that particular asset, which our rivals had not succeeded in acquiring by ordinary competition, might suffer very serious damage, if not extinction, in connection with the railroad situation, unless protected in some manner. At that time there were no Americans in Ethiopia, and the United States had no point of official contact with the Emperor's Government. The President determined that our existing and very tangible interests should be looked after; a fair trade treaty was negotiated, but not without opposition, and henceforth, however the complicated political conditions adjust themselves, American trade is guaranteed the right to expand as rapidly as the development of the Empire will admit.

NO DEMAND FOR HEAVY ARTICLES.

At present there is virtually no demand whatever in Ethiopia for machinery and other heavy manufactured articles. Sooner or later not only material for the railroad will be required, but also material for mining and other enterprises which the railroad will make possible. Abyssinia is a country that Americans will do very well to keep in mind. I wish they would visit Ethiopia as prospectors, and take a hand in bringing out its hidden wealth, about which very little is known. Gold has been brought to light in that country since biblical times, and that is but one of many classes of its natural wealth. The country possesses a peculiar power of fascination to those who have once traversed its beautiful highlands and come into contact with its ancient and primitive civilization. It is not a place for poor men, however, but one for strong, able men, capable of summoning capital and of gaining the confidence of the leaders of the country. Americans of the right sort will be properly received.

We need not feel discouraged in regard to our commercial status in Ethiopia. We are hampered only by obstacles which arrest the development of American trade everywhere, temperamental obstacles, for if the truth be told we are great manufacturers and very indifferent merchants. For example, some time ago the Engineering News published a note in regard to the requirements of an Abyssinian firm which had enthusiastic confidence in the desire of American concerns to get export business. A few vague replies were received, but not the slightest attempt was made to give these people prices other than f. o. b. New York, and, if my memory serves me well, the order was ultimately filled in Belgium. These incidents are depressing, but, despite them, it may be said that were our general export trade proportionately equal to our Ethiopian trade we might well feel the whole boundless universe ours.

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SOUTH AFRICA.

BUSINESS OUTLOOK ENCOURAGING AT CAPE COLONY.

Consul-General Washington, of Cape Town, writes interestingly about commercial conditions in Cape Colony. The artificial conditions caused by the war have given place to normal and more stable conditions. At present the outlook for trade, while not as brilliant as it might be, is reassuring. South Africa, like South America and Asia, is a land of large possibilities. As it emerges from the agricultural and crude mining state to the more complicated conditions of highly differentiated labor, its demands are to be great. It will want hundreds of the machines, tools, and implements that have made mining, farming, and transportation on a large scale so successful in the United States. Any effort that is made to secure markets in Africa or in any of those parts of the world that are just opening up, as the United States opened up fifty or seventy-five years ago, ought to be covered by the best class of American agents.

IMPORTS.

The imports into the colony have been steadily declining for the last two years. Merchants were heavily overstocked with all classes of goods during the war period in anticipation of a boom which never came. Enormous quantities of surplus war stores were placed on the market at low prices, heavily increasing the congestion, and finally the purchasing power of the public received a severe setback, partly in consequence of the war and partly in consequence of the prolonged drought.

The import records of recent years show how abnormally the trade of the colony expanded, and perhaps how abnormally it has now declined. In 1898 goods to the value of $80,887,819 were imported. Five years later the importations had risen to $156,261,392. In the last twelve months they have declined to $97,248,194. The following statement showing the value of the imports for the five years, 1898 to 1904–5, will make the position clear:

1898	$80,887,819
1900	83,517,953
1902	156,261,392
1903–4 (fiscal year)	134,592,790
1904–5 (fiscal year)	97,248,194

Imports to-day exceed the imports in 1898, the last normal year, by about $16,000,000; hence, it is argued by some, they must still be in excess of requirements, and that until the level of 1898 has been reached a sound basis will not be reached. This argument does not, however, allow for the natural increase in the population and consequent increase in consuming power. In 1898, with a white population of about 430,000, imports amounted to $80,887,819. According to the census of last year the white population of the colony was, approximately, 580,000, and, granting that the consuming power of the people has a definite ratio to the population, it might reasonably be expected that the imports would have totaled at least $107,063,000 in 1904–5.

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In reality they were ten millions less, a fact which points to the conclusion that a sounder basis has been reached. That depression exists in practically all business is a fact. Unfortunately for trade here it appears that imports in the war period were greatly in excess of requirements, and the reactionary penalty is now being exacted.

The treasurer of the Transvaal, in his recent budget statement, declared that from inquiries he had made he had no doubt that surplus stocks had been exhausted in the Transvaal, and that a period of normal importation might be reasonably expected. The same more hopeful feeling is entertained in this colony.

EXPORTS.

The export side of the trade account at first seems more encouraging than it really is, as in the past twelve months goods were exported to the value of $27,452,972 (leaving out of account gold and diamonds), an increase of $4,175,457 on the exports of the preceding year, and of nearly $7,500,000 as compared with the year 1898. But this increase can not be regarded as a natural and healthy growth, since practically the whole of the surplus is accounted for by the export of mules and oxen and transport accessories to German Southwest Africa. Once the campaign now in progress there is over practically the greater part of this trade will cease.

A comparison of export tables for the past twelve months with those of 1898 shows that the staple exports of Cape Colony, with the sole exception of ostrich feathers, have made no progress. Far less wool and mohair has been sent abroad in the past year than in 1898. The fruit export trade has developed from $394 in 1898 to $38,900 last year. This amount, while small, is yet important as regards its rapid growth, and promises to continue. It must be remembered that the fruit supply here is very large and very cheap, and that it comes when the Northern Hemisphere is in winter. Greater attention is now being given to packing to meet competition, and modern appliances are now installed on steamers for its transportation to England.

A hope is expressed here that the Transvaal will become an important purchaser of such articles as compressed hay, mealies, vegetables, wine, fruit, and meat produced in this colony, and so replace the foreign products consumed in the Transvaal. I am inclined to think that the day is yet distant when this country will be independent of the foreign producer.

The decrease of nearly $2,500,000 in the imports of frozen meats is due more to the reduction in demand than to the increase of the supply of native beef.

EAST AFRICA.

COMMERCE OF MOZAMBIQUE AND ITS PROSPECTS.

Consul Hunt, of Tamatave, Madagascar, transmits the following translation of a report made to his Government by the French consul at Beira, covering the commerce of Beira and the territory of the Compagnie de Mozambique:

The town of Beira is the principal port as well as the seat of the administration of the territory granted to a chartered company, known

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as the "Compagnie de Mozambique." This company, whose head office is at Lisbon, with branches at Paris and London, has full power over an area of 39,526,000 acres, running along the Mozambique Canal some 248 miles. This immense territory contains untold mineral and agricultural wealth, which has not been exploited, except on a small scale. There are evidences of the existence of gold and copper; and some coal deposits have been discovered. In the district of Manica, which borders on the Rhodesian frontier, are gold mines which are thought to be a continuation of the reef discovered in Mashonaland. However, up to date, no mining enterprises of any importance have been undertaken.

Since the establishment of the town of Beira, which dates from 1890, the secret of its rapid progress is the railway connecting it with Rhodesia. This railroad extends as far as Bulawayo, connecting with the famous "Cape to Cairo express line," the rails of which reached Victoria Falls, on the Zambesi, last August. It traverses some 210 miles of the Mozambique Company's territory, and brings Beira within 375 miles of Salisbury, 675 miles of Bulawayo, and 953 of Victoria Falls. Beira vies with Lourenço Marquez as a port, and is the natural outlet to the hinterland. But as progress in Rhodesia has not kept pace with that of the Transvaal, the situation of Beira is not advantageous as a port of entry, especially for American, German, and English goods. Importers prefer to ship via the Cape to points in Rhodesia rather than to lose ten days by way of this port.

PROTRACTED COMMERCIAL DEPRESSION.

The internal progress of the Mozambique territory for the past two years may be dismissed with mention of the establishment of experimental gardens, under the direction of a French agronomist, at Manbouc, Chirinda, and Chimora, and work on the concession belonging to the "Compagnie du Buzi." Nothing else has been attempted to open up the territory's resources. The commerce of the territory has suffered much through the depression which has existed since 1903, not only in Rhodesia, but throughout South Africa, and the combine between the English railways of South Africa has contributed somewhat to Beira's depression, through the reduction of freight and passenger rates between the Cape and Rhodesian points. Another serious blow has been the transfer of the offices and workshops of the railway company to Umtali, which has taken from Beira a large part of her population and prosperity, thereby reducing the white population from 1,376 to 1,162.

IMPORTS AND EXPORTS.

The value of imports for the year 1903 was $2,380,068 and of exports $1,457,716. Of the imports $1,016,378 were furnished by Great Britain, $605,504 by Portugal, and $131,078 by Germany. The United States and France are low on the list of importing countries, the former being represented by $29,162 and the latter by $27,569.

The custom tariff which became a law November 13, 1902, has been modified in some respects by a new decree. The ad valorem duty is increased 25 per cent on the value of imports at the port of discharge. A duty of 3 per cent is charged on all goods in transit for Rhodesia.

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There are branches of the following banking institutions at Beira: Bank of Africa; Standard Bank of South Africa; African Banking Corporation.

The principal houses of commerce are Messrs. Sutter & Co., The Manica Company, and the Rhodèsia Cold Storage and Trading Company, Companha Agricola de Moribanc, The Philippi Company, J. D. Martini, J. Perrin, Waghi, and the African Trading Company.

WEST AFRICA.

BRITISH AND AMERICAN TRADE.

Consul-General Guenther, of Frankfort, Germany, transmits the following extract from a recent report of the British consul at Angola relative to British and American trade in that Portuguese province in West Africa:

British manufactures, with the exception of Manchester goods, do not hold their own, not on account of any inherent defect, but simply because they are not pushed.

Machinery manufacturers content themselves with asking the names of possible purchasers. The American firm, referred to in my reports as far back as 1902, sends out a representative annually, and consequently sells almost all the plantation machinery used in this country.

This sustains what has been said, often and emphatically, in my reports. As early as 1892 in a report on the trade of Mexico, where at that time I officiated as consul-general, I said to our manufacturers and producers: "If you want to sell your products in foreign countries you must send able and reliable representatives there who must know or acquire full knowledge of their language, manners, and business usages." Since then no better method has been discovered for doing trade abroad.

EGYPT.

THE RED SEA BORDER.

COMMERCIAL AND TRADE OPPORTUNITIES—SUDAN A PRINCIPAL PORT—COMMODITIES IN DEMAND.

Consul Grout, of Valetta, Malta, furnishes an interesting letter on existing conditions of that section of Egypt bordering on the Red Sea, which was written by the representative of an English commercial house. The consumption of merchandise of foreign manufacture is steadily growing in Egypt, and that country is being closely studied by enterprising business men of European manufacturing countries. The following communication, although written for a British exporting house, contains much information that may prove valuable to our manufacturers and merchants:

A large business house here recently received from one of its friends in Egypt, a gentleman who has spent a long period there and who is well conversant with the business and other affairs, a report upon the

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prospects for trade at Port Sudan. Through the courtesy of the firm I have been permitted to copy and submit it for the consideration of such of our houses as may be interested. The report alluded to is as follows:

Having recently left Port Sudan, or "Sheik Bargond," in the Red Sea littoral of Egypt, where I was employed for some time in the public works department of the Egyptian Government, I had excellent opportunities of studying the various commercial and trade points connected with that part of the country. From what I saw and observed, personally, as well as officially, I frame this report, the object of which is to point out the exceptional advantages offering themselves to any large English business house dealing in a variety of goods, but principally in the line of provisions, establishing a business connection there, and probably leading to obtaining practically the entire monopoly of the Sudan and central African trade.

MONOPOLY OF IMPORTS.

At present the only part of the Red Sea of any importance whatever, belonging to the Egyptian Government, is Suakim. This part has the absolute monopoly of all imports into the Sudan from the Red Sea side, and is the sole base of the cotton export trade of the Sudan, but communication and transportation into the interior at present is exclusively carried on by camel caravans, and even that is rendered more arduous by the water difficulty and has resulted practically in the import trade being confined merely to the requirements of the population of Suakim itself and of the few comparatively unimportant villages in the vicinity, this import business, too, being just equal to the requirements of the Suakim population, and inadequately performed by the ships of the Khedivial Mail Company, running between Suez and Suakim fortnightly, and carrying goods for Suakim expelited from Cairo, also from Alexandria or Port Said to Suez and thence shipped on to Suakim. Suakim itself is a very small and highly dangerous harbor, surrounded by coral reefs and shifting shoals, lacking deep-water anchorages and other conditions rendering navigation very risky for all vessels over a certain draft or tonnage.

COOPERATION OF THE GOVERNMENT.

The Egyptian Government, realizing these points, and being fully alive to the vast trade possibilities of the future in the Sudan, both as regards export and import trade, which depend solely on the development and civilization of the interior as time goes on, has decided to offer all possible encouragement and facilities for the expansion of this trade. With this end in view they have set to work to construct a railway connecting Suakim on the Red Sea with Berber on the Nile, and, secondly, to find or construct a suitable harbor and port to supersede Suakim, which is quite unsuitable for a large shipping business, to be the means of feeding the interior from the Red Sea side with its present and future requirements.

The railway in question is well under way and approaching completion. In the matter of a suitable harbor, luck has favored the Egyptian Government in the existence of the natural harbor of Sheik Bargond, situated some 30 miles from Suakim, and now known as Port Sudan. This harbor is by nature admirably adapted for the large requirements

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expected of such a port, being large, deep, quite protected from reefs and shoals, and offering approaches to it far less dangerous to navigation than is the case at Suakim; in fact it fulfills all the advantages so conspicuously lacking in the port of Suakim for the furtherance of trade with the Sudan and interior. The only possible drawback would seem to be the lack of sweet water at this spot, as all drinking water has to be brought down to the coast by camels from the hills some 7 miles away. This drawback, however, can be and is already being avoided by the construction of artesian wells. If necessary, a condensing ship may be provided, as was formerly done at Suakim.

AN IDEAL HARBOR.

For the rest Port Sudan forms an ideal harbor even to the extent of offering two shores, so to speak, from its geographical configuration, one on each side of the actual harbor, thus rendering possible and practicable the erection of two distinct towns. It is the avowed intention of the Government to make Port Sudan the principal port of the Red Sea on the Egyptian side, and to this end it is not sparing time nor money. The director of public works is being given a free hand and practically carte blanche in whatever he deems necessary. He has a highly efficient staff and 3,000 native laborers are engaged at the works.

The railway has its terminus at present at Suakim, but passes some 13 miles from Port Sudan and a branch is being laid to that place, which eventually will become the real important terminus. With Berber connected with Port Sudan by rail the transit of goods into the Sudan by it so far and thence by river to Khartoum and the interior will be expedited and facilitated tenfold and with a great decrease in cost from the present circuitous and costly route, i. e., from Sugland to lower Egypt, thence by rail to Cairo, and again partly by rail and partly by river to Khartoum.

METHODS OF CONDUCTING TRADE.

A general idea having been obtained of the future importance of Port Sudan, and the facilities it will afford for the transit of goods into the Sudan, I propose to give some insight into the manner in which trade of Suakim is run on general lines, and to point out the means by which the major part of this trade can be easily diverted into a new and solid channel if only the business is taken up at once and in earnest by some large firm which chooses to devote itself to this object and is prepared to make the small initial outlay. At the present time not one large British firm, to my knowledge, has established its own agency exclusively in any town in Egypt, though of course most of them are represented by one or other local firms which combine their own business with taking agencies from large European firms and selling the latter's goods on commission. The major part of the business is done by one or two local firms of more or less magnitude, and also by a host of petty Greek traders on the smallest scale of importance. The same applies to Suakim. In the latter town the chief dealers in provisions, wines, and necessaries of imported nature are two in number, both Greeks, who divide among themselves the entire provisioning and general supply of the whole European population and, what is of special importance, that of the large number of employees, prospectors, merchants, etc., who are dotted along the railway and telegraph lines, various out stations, harbor, light-houses, etc.,

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these amounting to a very considerable number and almost equaling Suakim itself.

I do not think it can be said that the prices charged by the two merchants above mentioned are exorbitant, but considering the length and natural difficulties and risks attending the transit of their goods, and the double set of customs dues to be paid, these prices are very reasonable compared with English prices, and it is obvious that one firm exporting direct by sea its own products to Suakim or to Port Sudan will later on be able to considerably undersell and yet make a handsome profit. The way in which each town and village keeps its trade in the hands of its own representatives is very striking. Each place runs its own merchants, so to speak, and firms from other and larger places do not seem to care to intrude or enter the field. As an example of this, the largest firm of general merchants in Egypt, Walker & Meimaradin, have their big depots at Cairo only, and do not even have branches at Alexandria, Port Said, or elsewhere. Yet they do a splendid business, and are now formed into a limited liability company with a capital of £250,000. This firm keeps to Cairo and does not seek to extend itself into the interior or to encroach upon local firms elsewhere. Thus the entire Suakim and Port Sudan trade is shared by two local Greek firms, who more or less charge the same prices and so establish a sort of trust.

EUROPEAN POPULATION INCREASING.

The European population of Suakim is daily increasing with the works in hand now, and will continue to increase largely as these progress. To these must be added the employees who are to be found at the encampments dotted all along the railway and telegraph lines which are being laid, and who form a considerable addition to the numbers to be reckoned as customers. These latter depend almost wholly upon tinned stuffs and stores from Suakim, as there are no local resources to draw from except an occasional sheep. Their consumption, therefore, is an important item for consideration, and added to the population of the Suakim and Port Sudan depends very largely upon tinned stores. Suakim produces nothing. When I left Port Sudan one of the firms above referred to had set up a store temporarily in a shanty, which he kept replenishing as required from his main store at Suakim. At the time there was no question of a large European firm opening up a branch there. It will be readily seen that the field is open for any enterprising parties, who may at once enter into successful competition. If such an enterprise should be established, supplies of desirable goods from the States kept constantly on hand, there is little doubt but a large share of the local business would be secured.

WANTS OF THE NATIVES.

The native population must be considered as a buying and consuming factor, its wants being so few and simple that, until actual experience has shown what they require chiefly and in what quantities, it is difficult to estimate the value it would represent. On the other hand, the 3,000 workmen employed at the works by local contractors would necessarily consume largely, and the firm doubtless offering tenders to the contractors, if comparing favorably with local prices, would probably end by getting the supply of whatever their chief consumption consists of into its own hands.

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So much for Suakim, Port Sudan, and the environs and outlying camps. These in themselves promise considerable business, but the firm establishing itself at the coast will be enabled to gradually look farther afield into the interior. After the various villages between Suakim and Berber there would be Berber itself to be considered, and thence the places of importance from Berber to Khartoum, and all the way up the Nile, till the output from the Montassa end is met, a spot, I fancy, many hundreds of miles in the interior of "Darkest Africa" following the trade route. The provisioning and general supply of all these would fall well within the scope of such a firm. It must be considered as regards Europeans in upper Egypt and the Sudan generally, and, of course, even more so, such as are stationed in out of the way spots, that they are obliged periodically to get stores sent up to them from the nearest civilized center, these again depending upon Cairo, and to always keep these stores replenished against a possible move on or an expedition. Further, I must add, that perhaps with the exception of occasional local products, such as milk, eggs, etc., everything has to be imported from a needle to an elephant rifle, from a pencil to a marquee tent.

NATIVE LABOR AND TRANSPORTATION.

The question of native labor has to be considered, it being almost obvious that of this there is any quantity and at very cheap wages, especially in the Red Sea ports—Cairo, Alexandria, Suez, and Port Said. Native labor at Port Sudan is usually to be hired from local contractors, who place at one's disposal gangs of men under their own foremen, and command pay at the rate of £1 10s. per month each, working hours being from dawn to sunset, with an hour for the morning meal and two to three for the midday one and rest in the heat of the day. For the immediate future goods landed at Suakim would have to be forwarded to Port Sudan by means of native "cyasses," or big sailing barges, doing the journey in from twelve to twenty-four hours comfortably, and costing per cyassa per trip from £1 to £2, according to load of 30 tons.

ARTICLES THAT WOULD SELL.

The question of what would be the most profitable sort of goods to supply is easily answered. Any and every sort of eatables, liquors of all sorts, mineral waters in great abundance, and all and every sort of articles which would be of use to the pioneer in general and to the man who, finding himself cut adrift from the civilization he is accustomed to, attempts by regulating his immediate whereabouts to as nearly approach the conditions he has left behind and secure as much comfort as he can. Luxuries as well as necessities form a large item of local consumption. Tinned asparagus, as well as corned beef, preserved ginger as well as ordinary jam, and many other articles that could be mentioned are desired. After this we may reckon such articles as soaps, cleaning and polishing materials, candles, crockery, lamps, stoves, tents, tools, etc. Hardware forms an important item. Further there would be required boots and shoes, cloths, underlinen, etc., and, in fact, almost everything sold by firm at home dealing in general supplies. To specify what particularly struck me as promising a large demand, I may mention fresh vegetables and mineral-water machines, the former being sent out regularly in ships with refrigerators and the mineral waters being locally made at various widely distributed depots to supply local demand.

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EUROPE.

ENGLAND.

LABOR COPARTNERSHIP.—POPULARITY AND PROFITS OF COOPERATIVE ASSOCIATIONS.

Consul Swalm, of Southampton, England, makes an interesting report on an exhibition recently held at London as the results of labor copartnership. The consul writes:

One of the most interesting as well as instructive exhibitions of the results of labor cooperatively managed, opened at the Crystal Palace, London, in the last week of August, under the auspices of "The Labor Copartnership Association," which at the same time signalizes its twenty-first year of real, practical official life. For a very long time cooperation in some form, municipal or the combined individual form, has had adoption in the manufacturing centers of England, as well as in rural communities, some on municipal lines dating back as far as 1251, at which time the supplying of "good, clean water for the use of the inhabitants" was taken in hand by the old town of Southampton, and continues so to this day in that section known as the old town. In the past quarter of a century, however, an active and practical propaganda has been carried on on the lines of organizing all classes of industry devoted to labor cooperation, in which mutual sharing of profits, capital, control, and responsibility should be the common lot. At the same time every inducement was given in argument to induce employers of labor to adopt plans of profit sharing and investment, with gratifying success, considering the conservative character marking the English business community, not to say the workmen themselves.

PRODUCTS AND PROFITS.

The exhibition showed the products of nearly one hundred different cooperative associations, and in the general quality and finish of goods met every ordinary and sensible demand. Some of these exhibitions had been in working existence from 1862, when the Paisley Manufacturing Society was formed. In 1872 Hebden Bridge Fustian Society came into life, followed by the Airedate Worsted Manufacturing Society, at Bradford; then the Wallsall Lock and Hardware Society, and the Leek Silk Twist Society. These are mentioned among the many others, from their splendid success attending them as prosperous manufacturing concerns, in which labor is also the owner of the plant as well as the sharer in the profits arising from sensible and up-to-date management. It should be here stated that with the formation of the labor association, the interest in labor cooperation and partnership was quickened and consolidated, and a way afforded for the easy adoption of well-tried plans, and reasons given why so many dreams of the past had been rosy dreams only when brought to the hard test of practical

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work. Such men as Mr. Henry Vivian, the very able secretary of the association, and his coworkers, have builded a structure that to-day stands the test of practical judgment. Success is a sufficient answer to general criticism; labor and capital mutually profitably employed is an answer generally found satisfactory.

GROWTH OF THE SYSTEM.

The statistics that Secretary Vivian furnishes are of much interest. In 1883 there were only 15 cooperative societies for production, based on the copartnership policy. In 1903 these had increased to 77, and now number 126. In 1883 the capital of all classes amounted to $500,000. In ten years this had increased to over $3,000,000, while now it stands roundly at $9,400,000. In 1883 the sales were about $800,000; by 1893 they had increased to $8,000,000, and in 1904 to the sum of $16,500,000. In 1883 the profits were $45,000; in 1893 they reached $325,000, while in 1904 the sum so set aside was above $900,000, with a dividend further on wages of $115,000. These figures as to the number of societies include those found in Scotland, where are found several large establishments, the Scottish Wholesale and the United Baking being most prosperous concerns. In Ireland the cooperative idea is strongly in force, but copartnership is recognized only in the setting aside of 10 per cent of profits for employees, and according them the right to become shareholders, but none of the Irish business is here calculated.

COOPERATION IN AGRICULTURE.

On agricultural lines, both in England and Ireland, the cooperative idea has found successful adoption. In Ireland the agricultural cooperative societies number about 800, with 79,000 members, and controlling a trade of $7,200,000. The societies are formed almost wholly of the small working farmers, and they are generally well satisfied with the practical benefits that have been assured in the past. With an increase of about sevenfold in a comparatively short time the advocates of the copartnership plan feel decidedly hopeful as to the future. It is a pleasure to note that the report shows a devotion on the part of the controlling factors to plain duty honestly performed, of the most gratifying character, meeting high ideals faithfully

DISTRIBUTION OF PROFITS IN GAS.

One of the notable adoptions of copartnership outside of cooperation is that found in the South Metropolitan Gas Company, London, which movement was started by the chairman of the company, Sir George Livesey, as far back as 1889. Commencing then the employees of that company have received, as a share in the profits, the very large sum of $1,300,000, and at the same time shares in the company have been taken by the employees to the value of $1,125,000. In 1904 the sum of $210,000 was divided, giving above 9 per cent on the wages. These employees have three members of the board, elected by their fellow-workers and shareholders, by ballot, or one-third of the board. The South Suburban Gas Company, which began its copartnership scheme in 1894, has divided $100,000 with its employees, and they hold $125,000 worth of stock. They elect two directors on the board. There

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are a number of other gas companies, metropolitan and rural, which have adopted similar plans, and it is to be noted that where the copartnership plan has been once adopted there have been no recessions. All report that the advantages have been great to the companies as such; for, by giving the workmen a practical interest in the results of their toil, they have not been impeded in any way, but by reason of this interest, have been enabled to furnish their product cheaper to the consuming public. The factor of discontent has been eliminated, the workman does his task in a watchful way, and the careless and the laggards find themselves "bossed" by their own mates, to the proper performance of the task that may fall to them.

There are many other phases of the copartnership in actual practice in many portions of the Kingdom. Great manufacturing plants expend the share that would follow from profit sharing in surrounding their employees with better housing, recreation, and educational advantages in a manner deserving the highest commendation, and receiving it from an observant and appreciative world of thinkers on these lines. In fact, they create "gardens of delight" in a somewhat dreary manufacturing land, where the individual's personal condition receives scant consideration save only that which is secured by organization.

GOOD EFFECTS OF THE SYSTEM.

A vast amount of educational work has been done among the working classes and much more remains to be done. The lack of general education of the class sought to be benefited, through lack in the past of schooling privileges of practical character, has left much to be desired on these lines. With the successful establishment of these copartnerships has come into practical shape prosperous and contented communities, and that alone is proving an immense factor in the development of the idea among these who think beyond the week end. Copartnership has not been made antagonistic to trade unionism, but is made to lead that organized spirit out on lines of real self-help.

HULL AS A WOOL MARKET.

FAVORED BY GEOGRAPHICAL POSITION.

Consul Walter C. Hamm writes from Hull, England, that a movement has been begun by the chamber of commerce of that city to make Hull a wool market, and especially for the Australian wool trade. The only surprising thing about the movement is that it was not begun before. It seems curious that, although the bulk of the wool imported into England is manufactured in Yorkshire, the largest imports are to London. Why Yorkshire manufacturers should be put to the expense of traveling all the way to London to buy supplies when they have a port within an hour and a half's journey is a question no one seems to have troubled himself to ask.

The exports of wool from Australia to England during 1904 totaled 220,483,061 pounds. This was below the 334,355,000 pounds shipped in 1901, but in the intervening years the drought occurred and several million sheep died off. During the present year it is confidently anticipated that the shipments of wool will be very much increased. So far as England is concerned the great bulk of the wool used for manufacturing purposes is manufactured within 50 to 80 miles of Hull. Yet

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the shipments through the port are comparatively small. Last year the wool imported to Hull amounted to 20,155,529 pounds, of which total 9,051,451 pounds were from Australia. The imports of wool to London last year totaled 399,307,238 pounds; Liverpool imported 89,061,019 pounds, and Manchester 2,235,894 pounds. It is a significant fact that in 1900 the last-mentioned port only imported 217,671 pounds, so that the increase in five years has been tenfold.

Hull, by virtue of its geographical position, is peculiarly adapted for a wool market. The port is in close proximity to the woolen centers in the West Riding of Yorkshire, where the bulk of the colonial wool goes, and as compared with London and Liverpool the railroad rates from Hull are wholly in favor of the Humber River port. Wool landed at Liverpool and intended for Leeds has to bear an expense for railroad carriage from Liverpool to Leeds of $5.54 per ton, while if shipped via Hull the cost would be $2.80 only. From Liverpool to Bradford, Halifax, Huddersfield, and Heckmondwike the rate is exactly the same as to Leeds, $5.54; whereas the charges from Hull are, respectively, $3.60, $3.76, $3.80, and $3.40. The average railroad carriage rate from London (which receives the greater part of the Australian wool) to the places mentioned is $7.20 to $7.80. The disparity in the rates is somewhat striking, and tells strongly in favor of Hull.

Hull's imports of wool in 1904 came from these countries in the following quantities: Australia, 9,051,451; Russia, 4,665,741; France, 1,276,429; Belgium, 1,197,064; Germany, 1,066,381; Holland, 709,495; Italy, 767,344; Denmark, 548,134; India, 414,400; America, 362,540; Austria, 39,256; Norway, 20,510; Turkey, 16,464; Spain, 11,200, and Sweden, 9,120, making a total of 20,155,529 pounds. The greatest amount received was in 1901, when the figures were 45,438,427 pounds. A fair amount of this wool has gone to America. In 1902 the shipments of wool from Hull to the United States were valued at $37,121.41; in 1903 $171,166.10 worth was shipped, and in 1904 $90,380.30 worth was sent.

If the movement to make this port a wool market materializes, American buyers who have patronized the London and Liverpool markets may find it to their advantage to patronize Hull. A line of steamers runs direct from this port to Boston and New York, and freight charges are below the rates from London and Liverpool.

OIL INDUSTRY.

ANXIETY OVER THE RUSSIAN SITUATION.

Consul-General Wynne, of London, reports great anxiety in England in regard to the oil trade. He quotes an interview that accords the United States a far more favorable position in the oil world than it had previous to the fires in the Russian oil regions. He writes:

There is great anxiety here among those engaged in the oil industry over the devastation wrought by incendiary fires in the fields of the Balakhany and Bibi-Eibat districts. The effect of this condition of affairs on the British oil trade is thus stated in the following interview with a dealer who has just returned to England from the disturbed localities:

"Before the massacres there was an alarming dearth of liquid fuel, but this state of things only affected the millions of consumers in

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inland Russia. As a matter of fact the refined oil was considerably less in price than liquid fuel. The percentage of the latter extracted from the crude article has, from various causes, been steadily declining. Lately deliveries at Baku have been getting less and less, partly owing to the interruption of the railway and pipe-line services and partly to the serious strikes and riots at Baku. The stocks at Batoum are practically exhausted, and this is an important factor in the situation in this country. It is a fact which will enable the Americans to kill the market here. From January 1 to August this year shipments of illuminating oils from Batoum to Europe only reached 25,500,000 poods (a pood being 36 pounds avoirdupois), as compared with 41,500,000 for the corresponding period of last year.

"In this country, where the chief distributing centers are London, Liverpool, and Manchester, the new situation is being anxiously watched. What has taken place in Russia will most probably have a great influence in the direction of ending the oil war in this country—a war which has been going on for several years, and in connection with which a great deal of money has been lost. The Americans need no longer fear serious competition from Russian oil, but still they are not likely to overlook the fact that Armenia, Galicia, Borneo, Sumatra, and elsewhere will now do their utmost to secure the foothold which they have been struggling to get for a number of years.

"It is wrong to imagine that British capitalists have a preponderating influence in regard to the oil fields of Baku. As a matter of fact their interests are insignificant as compared with those of such firms as Nobel, Rothschild, and others."

For years past there has been a steady increase in the consumption of petroleum, and it is said that a pipe 41 inches in diameter would be required for the conveyance of the petroleum which the world is at present using, assuming a rate of flow of 3 feet per second, and that for the storage of a year's supply a tank 929 feet in length, breadth, and height would be wanted. Hence the sudden stoppage of one of the principal sources of supply can not fail to have a most far-reaching effect.

FRUIT GROWERS ORGANIZE.

DEFENSIVE EFFORTS OF ENGLISH HORTICULTURISTS.

English apple and fruit men, according to Consul Swalm, of Southampton, have organized a cooperative movement for handling green fruit. It is somewhat similar to the Scandinavian plan in regard to eggs, etc. The report follows:

The very sharp and surprising competition of North American and colonial apples with the English product has led to very practical action on the part of the orchard interests in Herefordshire and in some other apple-producing counties. In the past English apples have come in bad condition, and have been badly selected and packed. This is all to be changed by a system of cooperation—the formation of the Herefordshire society providing for the marketing of the crop on cooperative lines—after it shall have been duly graded and properly packed. The English fruit has a solid popularity in the local markets, but heretofore the condition in which it was marketed cut it out of competition with the imported, well selected, and packed prod-

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uct. The general objects of the chief society organized has these things in view:

(1) To enable any person, from the smallest cottager to the largest fruit grower, to dispose of his fruit at the minimum of expense and the maximum of profit.

(2) To advertise and make known the excellence of Herefordshire fruit by offering it for sale in a reliable and attractive form.

(3) To classify the leading varieties of apples and pears (which have been proved to be the best adapted for this country), and to grade these varieties into standard brands according to their season. To recommend nurserymen and fruit growers to propagate and grow these varieties as their main crop.

(4) To offer to the best advantage the many excellent, but little known, named and unnamed, varieties of cooking and dessert apples of that county by packing and marking them in distinct grades of size and quality.

(5) To bring the apples of different growers together, so as to make up large consignments for market of uniform variety and grade.

Each contributor of fruit to the marketable mass will receive pay and profit on the grade he has sent in; but he gains by being able through cooperation to reach a greater market than that found locally.

As the annual average import of foreign apples amounts to about 12,000,000 bushels, some idea of the demand may be had, and of the value of the market.

It may not be without interest that hand-picked apples, of the crop of 1904, were preserved in most excellent condition to the middle of August by being first wrapped in white or unprinted paper and then packed in layers between powdered or crusted peat and kept in cellars. A personal test of the fruit was made, and in flavor and condition it was first-class.

MILLING OF WHEAT.

DISCOVERY OF A NEW METHOD.

Consul Hamm, of Hull, says that a correspondent of the London Times calls attention to a new method of milling wheat, which, it is claimed, "embodies a discovery that will prove as valuable in its own sphere as Bessemer's discovery in the production of steel was in its sphere." The process was invented by Mr. Apostoloff. It is not described, but is said to be in operation in London at a place designated. The correspondent says:

The ordinary cylinder or roller mills give a total yield of from 68 to 72 per cent of the weight of wheat milled. By Mr. Apostoloff's system a total flour yield of 85 per cent is procured. He thus gains an average of 15 per cent in the yield of flour, or an increase of about 21 loaves of 4 pounds each in the quantity of bread made from a quarter of wheat. So far the discovery applies to all wheats and is of equal advantage to all countries. But, in the second place, he has succeeded in producing from English wheat alone an absolutely pure and, as shown by analysis, a more nourishing and more wholesome bread than is obtained by the ordinary baker from more expensive flours, including those of the best-known American and Hungarian brands. And it

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is in this aspect of it that the discovery affects the prospects of British agriculture. Under the existing system of milling and baking the bread we consume is made from an admixture of English wheat with foreign wheats, the latter always largely preponderating and frequently to the extent of 3 to 1. Mr. Apostoloff can produce, and is actually producing from English wheat alone, a bread which experts pronounce to be equal in color and shape, and more than equal in nutritious qualities, to any bread produced, under the prevailing systems of milling and baking from foreign wheats.

If these claims are correct it will be to the advantage of American millers to look into this new method of milling. An increase of 15 per cent in the flour-producing capacity of wheat would be about equal to the addition of 100,000,000 bushels to a year's crop.

POSTAL STATISTICS.

FACTS ABOUT THE NUMBER OF LETTERS AND PACKAGES SENT.

Consul Stephens, of Plymouth, in summarizing the report of the British post-office department for the year ending March 31, 1905, recently issued, says the figures show a tremendous increase in the business done. The number of letters passing through the post-office continues to increase, the total for the year being 2,624,000,000. The number of letters delivered in London, however, shows a decrease of 5 per cent. This, it is claimed by the authorities, represents no falling off in London's correspondence, but is rather owing to the popularity of the picture post card, for it is to be noticed that the number of post cards used has increased by 19.7 per cent during the year. Newspapers to the number of 179,000,000 were posted, while there were 843,000,000 halfpenny (1 cent) packets and 97,000,000 parcels. A grand total of 4,479,000,000 communications of various kinds, excluding telegrams, passed through the mails.

The number of undelivered packets dealt with was 26,568,740, a decrease of 139,243, which is believed to be partly due to a diminution in the number of foreign lottery circulars posted in this country. The number of registered letters and letters containing property sent through the post with insufficient addresses was 315,965. These letters contained $86,769 in cash and bank notes and $3,027,562 in bills, checks, money orders, postal orders, and stamps. One packet contained jewelry whose value exceeded $10,000. The number of letters containing valuable contents posted with no address at all was 4,507, the contents including $46,568 in various forms of remittances. It was found possible to restore the greater number of these letters to the senders.

Although the number of insufficiently addressed letters was smaller than in the previous year, the total value of the contents thus jeopardized was greater by more than $20,000. There was a slight increase in the number of articles found loose in the post during the year. These included $5,699 in cash and $58,632 in checks and other forms of remittance.

TELEGRAMS AND TELEPHONE MESSAGES.

During the year 88,969,000 telegrams passed over the post-office wires against 89,997,000 in 1903–4. This falling off is thought to be

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due to the growth of the telephone system. The extension of the underground trunk telegraphs is going on, and underground communication with the city of Plymouth and the west of England is to be established. A pipe is being laid to contain 137 wires. It is to run between Llanwell and Slough. During the present year is is expected that it will be extended from Slough to Reading. A pipe and cable between London and Chatham is also being talked of as a beginning of an underground route to the southeast coast, the point of departure of many of the submarine cables.

The telephone system continues to flourish. The total number of conversations over the trunk wires for the year was 15,461,822. This shows an increase of 1,993,847, 14.8 per cent, over the number for the previous year. The gross revenue derived from this service was $1,850,769. The average value of each conversation was about 12 cents. The telephone is being more largely used for sending messages to the various post-offices for transmission as telegrams or express letters. Over two and one-half million telegrams were sent in that way during the year, and 48,000 express letters.

The postal revenue of the year was $79,202,180, the expenditure $55,749,578. The net profit was $23,408,603, or nearly $980,000 more than last year. On the working of the telegraphs, if allowance be made for interest on the capital created for their purchase, the telegraph deficit on the year is $5,917,557. It should be noted, however, that the yearly deficit on telegraph revenue is decreasing.

NOTTINGHAM LACE.

SETTLEMENT OF A PROTRACTED DISPUTE.

Consul Mahin, of Nottingham, reports the settlement of the lace-trade dispute which resulted so disastrously to the lace industry of that place. He says:

A report from this consulate, appearing in Daily Consular Reports December 19, 1904, described a stubborn and long-standing controversy between lace manufacturers and employees in this city. This report was reproduced in a London financial journal, and thence was copied into the Nottingham daily newspapers. As signs of relenting became manifest on both sides to the controversy the consular report in question, being the candid view of an unbiased looker-on, was credited with having had a favorable influence on the critical situation. The disputants finally decided to submit the case to an arbitrator to be chosen by the Government board of trade, whose decision was to be final. Mr. G. R. Askwith, a London barrister, was appointed. The plain-net manufacturers and employees came to an agreement voluntarily, and the arbitrator's decision in their case was a mere formality. The curtain branch was less easy, but the interested parties had drawn so near together that the arbitrator soon reached a compromise conclusion by directing that prices to be paid operatives be reduced from 2½ to 17½ per cent—the award to stand for five years.

The Levers' dispute—that involving the large variety of lace goods exclusive of nets and curtains—was a much more serious affair. In this award concessions were also made to both sides. Wages were reduced on various schedules from 8 to 30 per cent, but there is a belief that increased employment and more favorable conditions for

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working will compensate for these contractions. Perhaps the most important concession, from the general viewpoint, is that which permits certain changes in machines which will allow manufacturers to erect modern machinery, and thus be able to compete with outside concerns which have been drawing trade away from the city. This award is also to stand five years. The employees asked for two years, the manufacturers for six. The manufacturers hope that during this time they may be able to regain much of the business which has gone from Nottingham.

Neither side to the controversy is wholly satisfied with the arbitrator's decisions, but it is admitted that his work, altogether, has been thoroughly and efficiently done, and probably could not be improved upon, taking all interests into consideration. That both sides are hopeful of good results indicates that no serious dissatisfaction exists, and encourages a general belief that the threatened decadence of the city is averted. At the very least a stable condition of the local lace trade for five years is assured.

MERCANTILE MARINE.

TONNAGE COMPARED WITH THAT OF OTHER COUNTRIES.

A blue book published in London in September gives statistical details of the progress of merchant shipping. Most of the facts have recently been brought out in other forms, but a fresh aspect is given to some of the details. The following table is interesting, showing the tonnage of sailing and steam vessels of British and foreign nationality entered as cleared with cargoes and in ballast at ports in the United Kingdom in the trade with British possessions:

Year.	British.	Foreign.
1900	10,226,921	1,225,260
1901	10,866,555	1,193,729
1902	11,877,466	1,347,393
1903	13,254,448	1,173,680
1904	14,268,410	1,253,358

A similar table of tonnage for the trade with the United States is:

Year.	British.	United States.	Other foreign.
1900	11,640,114	549,025	1,471,524
1901	12,626,814	479,464	1,319,770
1902	12,143,890	562,921	1,164,373
1903	12,964,383	585,560	1,179,522
1904	11,829,772	701,240	1,545,404

The tonnage of entrances to ports in the United Kingdom from foreign countries and British possessions is as follows:

Year.	Foreign.	British.
1900	42,999,863	5,222,943
1901	42,962,179	5,638,837
1902	43,435,630	6,184,487
1903	45,776,895	6,738,237
1904	46,397,543	7,421,131

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NATIONALITY OF SEAMEN.

The nationality of seamen employed on British vessels is shown by the following paragraph from a London newspaper:

Last year 259,489 persons were employed on British vessels engaged in the home and foreign trades. Of these only 176,975 were British. Of the remainder, 39,832 were foreigners, while 42,682 were Lascars and Asiatic. The proportion of foreigners to every 100 British persons employed has risen from 14.05 in the year 1888 to 22.50 last year. The actual numbers of foreigners on British ships have increased in the period named from 25,277 to 39,832. The Lascars and Asiatics employed on British vessels numbered last year 42,682, as against only 18,427 in the year 1888.

EPITOME OF TRADE.

ENGLISH EXPORTS ON THE INCREASE—EXPANSION IN MANUFACTURED ARTICLES.

Consul McNally, of Liege, sends the following epitome of British trade for 1905, showing that England's foreign commerce is far from declining. He writes:

The latest board of trade reports in England indicate an increase both in exports and imports and stamps England still as a universal provider. The British newspapers say that while Germany, by careful attention to detail, benefits by at least some portion of the trade that would otherwise come to their producers, it is undeniable that 1905 has witnessed an encouraging expansion in exports and, what is most welcome, in manufactured articles; that this would seem to indicate that British traders have awakened to the necessity of keeping pace with up-to-date demands. Statistics prove that material increases have been made both in exports and imports for July of the present year over the corresponding month of last year.

	July.	Increase.
Imports	$216,577,841	$18,434,104
Exports	135,488,518	14,792,474

The trade for the seven months of the current year was excellent, the totals and the increase over the same period of 1904 being:

	Seven months.	Increase.
Imports	$1,547,816,632	$24,126,018
Exports	893,777,814	71,133,611

This export expansion for the above period is chiefly in manufactured articles, which show a gain of no less than $65,921,644. This indicates clearly that whatever may be said of England's home commerce, her foreign trade is in a flourishing condition.

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ARTICLES SHOWING GAINS.

Among the principal articles of manufacture which show large gains for the seven months are:

Articles.	Increase.
Iron and steel	$8,225,906
Other metals	3,643,145
Machinery	4,812,904
Cotton goods	27,462,801
Woolens	9,632,484
Chemicals	1,963,009
Leather and leather goods	2,053,225

Comparing the figures of last month (July) with those of the corresponding month of 1904, we find an increase of $6,547,846 in the imports of grain and flour and of $6,085,395 in raw cotton.

There is an increase of $13,054,589 in the exports of manufactured articles, the only decrease noticeable under this head being the small falling off of $66,626 in new ships.

Iron and steel manufactures increased by $3,367,819, machinery by $1,412,655, cotton goods by $2,317,900, woolen goods by $988,990, and chemicals by $830,233.

COMPETITION IN POTATOES.

Consul Mahin, of Nottingham, England, reports the results of a potato-growing competition held in Derbyshire the past season. Two pounds of Duchess of Cornwall seed were supplied to each member of the Hallam Fields Garden Association. Prizes were given for the largest crops and for best quality. The first-prize winner succeeded in raising 132 pounds of potatoes from his 2 pounds of seed, cut into 41 sets. The time of cultivation was one hundred and forty days. The average weight per set was 3.21 pounds, the proportion of increase being 66 to 1. The second-prize winner raised 122 pounds, and the third 121½ pounds, the remainder of the competitors falling behind by stages of 10 pounds until 26 pounds was reached as the lowest weight. The average of the whole competition was 70¼ pounds from 2 pounds of seed. The greatest produce was equal to 43 tons per acre. The combined product of the 28 competitors was equivalent to 25⅜ tons per acre. Ten tons per acre is generally considered a good yield. The average yield of the 700,000 acres of potato fields in this country is 6 tons per acre.

AMERICAN INDUSTRIAL INVESTMENT.

According to a clipping from the Leeds Yorkshire Post, forwarded by Consul Hamm, considerable satisfaction is felt in Hull over the announcement that a new industry, based on American capital, is to be opened in that city. Although secrecy is being maintained as to the precise purpose of the works, enough is known to warrant the belief that it is to be a branch of a well-known firm of American engineers that has already opened extensive works in Germany. The organization is complete and the necessary negotiations in Hull have been effected. A site has been selected, paid for, or put in shape for payments, and work has been assigned; hence the new firm and its works is regarded as a fact, over which Hull is rejoicing.

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IRELAND.

THE CATTLE TRADE.

LARGE SHRINKAGE IN SHIPMENTS—PRECAUTION AGAINST DISEASE.

Consul Moe, of Dublin, using figures furnished by the department of agriculture of Ireland, says there has been further shrinkage in the Irish cattle trade the past year. The report states:

During 1904 fewer animals were conveyed over the Irish railway systems than in the previous year, a fact which goes to show that the cattle trade has not recovered from the setback experienced after the exceptional activity which characterized the year 1902. The shipments of cattle, sheep, and swine from Irish ports to Great Britain also show a decline as contrasted with those for 1903, and they are below the decennial average. The figures for 1904 are: Fat cattle, 232,186; store cattle, 470,361; other cattle, 6,896; calves, 62,920; sheep, 739,266; swine, 505,080; total, cattle, sheep, and swine, 2,016,709. In 1903 the figures were: Fat cattle, 246,887; store cattle, 556,506; other cattle, 6,724; calves, 87,528; sheep, 825,679; swine, 569,920; total, cattle, sheep, and swine, 2,293,244. The decennial average for cattle, sheep, and swine is 2,223,727. The causes of the decline are difficult to assign, but in all probability the principal factors are the general trade depression, tending to reduce the purchases of fat cattle, and a reaction from the exceptional demand for store animals in the years 1902 and 1903. As compared with 1903, the number of horses exported shows a slight decline, but it appreciably exceeds the figure for 1902. The figures for 1904 are 27,662. In 1902 horses to the number of 27,836 were sent away, and 25,318 were exported in 1903.

Six orders were issued under the diseases of animals act. Two of these, entitled, respectively, "The animals (transit and general, Ireland) amendment order," and "The epizootic lymphangitis (Ireland) order of 1904," were of more than ordinary importance. The former, apart from the general provisions embodied therein, contains in its transit sections a number of new regulations having for their main objects the further improvement of the conditions of carriage of stock by railways and the prohibition of transit, either by rail or water, of cows too near calving, or of animals unfit from any other cause to be carried. The latter order schedules under the diseases of animals acts, and prescribes precautionary regulations in respect of epizootic lymphangitis, a disease of horses, asses, and mules unknown in Ireland prior to 1903, but of which various cases traceable to the influx of army horses at the conclusion of the South African campaign have since occurred in this country. By the addition of epizootic lymphangitis the list of maladies to be dealt with has increased to eleven. The history of the year is, however, concerned with no more than six of these diseases, as cattle plague, foot-and-mouth disease, pleuropneumonia, and sheep pox have been unknown in Ireland for long periods past, and there has been no recorded case of rabies in the country since 1903. The six diseases referred to and the number of animals affected by them are as follows: Anthrax, 4 cases; sheep scab, 486; swine fever, 181 cases; glanders, 11 cases; parasitic mange, 162 cases; and epizootic lymphangitis, 1.

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EPIZOOTIC LYMPHANGITIS.

It is to be feared that the stay in these islands of this recent visitant is scarcely destined to be of a brief character. Widely scattered cases seem to have occurred in Great Britain; but in Ireland, so far as is at present known, though outbreaks have been detected at a number of barracks in different parts of the country, it is only in a limited area, radiating from Waterford, that it has up to the present occurred among civilian horses. The initial appearance of the disease in that neighborhood was at Waterford Artillery Barracks, and it was in some horses, the private property of military officers, grazing on a farm near Waterford that the first outbreak in Ireland outside army premises occurred. Eight further outbreaks have occurred since January 1, 1905.

WHEAT.

QUANTITY LIMITED, QUALITY UNSATISFACTORY.

Consul Moe further reports that the millers of Ireland get their wheat outside; that California wheat, once popular, goes now to the Orient, and adds a word as to how the market might be secured. He writes:

A local press comment on the high price of bread in Dublin, and the probabilities of reductions in the sale price, continues: "Outsiders might imagine that the comparatively good home wheat crop of the present year would materially affect the question. But they would be entirely mistaken. The Irish wheat crop, and especially in the County Dublin, has been much better than usual this season; but it is quite too limited in quantity and too unsatisfactory in quality to have the slightest effect on the price of bread. For bread-making purposes, in fact, it does not count at all, and millers will not touch it. It is from foreign wheat that they produce the flour for baking, and they get their supplies chiefly from Odessa, Belgium, France, Australia, and also from America. The price of the foreign flour has fluctuated somewhat during the year. It rose in the early part of the season and has fallen again during the last couple of months. Owing to the moist climate Irish wheat requires to be kiln-dried before being ground, whereas the foreign wheat does not. This means a reduction in volume of about 10 per cent, so that a 20-stone barrel would only weigh 18 stone when dried, and the drying would cost 1 shilling a barrel.

"In the circumstances it is hardly surprising to learn that Irish millers have now discarded their kilns altogether and rely exclusively on foreign wheat. There was a good supply of Irish wheat in the Dublin market on Friday, and there was little or no demand for it. Coming back to the prospects of a cheaper loaf, our representative found it strongly borne in upon him that the fact that not a barrel of white California wheat can now be obtained on this side of the Atlantic, forms an important factor in the situation. All the California wheat, it seems, has been absorbed by China, Japan, and South Africa. This seriously militates against the facilities afforded Irish millers for getting coloring wheat, which is so essential for the home trade. They have been obliged to lean on Australia, which has furnished a satisfactory supply up to the present; but it may fail in time, and there is

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no other source for the production of white wheat except California and Australia. As to the tendency of prices generally just now, our representative was recently informed that a cargo of Australian wheat was sold in London at 32 shillings 6 pence ($7.92) per quarter; wheat of the same quality was sold last year at the same time at 29 shillings ($7.06) per quarter."

It would seem that as Irish wheat plays no rôle in the bakery industry the cheaper loaf will have to make its appearance only in the event of a very much increased importation of wheat, and that wheat must be looked for from our Western States, and must be sold here at lower prices than it has commanded of late. Reductions in wheat, even slight ones, would give our manufacturers of flour a tremendously large market in Ireland. It should be suggested again, as in the case of other produce, that the Irish trade can be captured with better advantages if a central depot is established in Dublin, thus avoiding excessive freight rates and middlemen; and a more direct method of doing business would soon clear the way for a flourishing market and result in a profit both to the baker, the consumer, and the manufacturer.

EMIGRATION.

EMIGRATION AND DEATHS EXCEED THE BIRTHS.

Consul Moe further reports that 12,643 persons, 5,907 males and 5,736 females, left Ireland in the three months ended June 30. Of these, 10,572 went to the United States. Of 10,115 steerage passengers, 4,060 had their fares paid for them by parties in the United States. In this connection the consul writes:

As against the departure from Ireland of these emigrants must be placed the fact that there were 26,862 births during the quarter in question, but the deaths numbered 19,616, representing an annual rate of 17.9 per 1,000. These figures would give an excess of births over deaths and emigration of 7,246. Numerous reasons for this outflow from Ireland are given, though curiously the actual reason is scarcely mentioned, since the elaboration of this reason in the press would only tend to increase rather than stem the tide of emigration, namely, the reason that American conditions offer greater inducements than those that can be found at home. The average number of persons receiving indoor relief during the quarter in Ireland was 43,531 weekly; the average number of persons receiving outdoor relief was 58,582 weekly, being 2,194 over the average for the second quarter of 1904; those receiving relief by means of works devised for the relief of distress numbered 13,656 weekly. The total number of persons receiving relief amounted to a weekly average of 115,769. In considering the emigration statistics, these figures must be considered as of influence, since these official figures relating to the unions or poorhouses in no way give a satisfactory view of unofficial pauperism in Ireland.

Bank Deposits.

According to a long report made by Consul Moe, the deposits and cash balances in the joint stock banks of Ireland amounted in December, 1904, to $224,418,647, exclusive of $10,764,698, belonging to the

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Government and other public institutions, deposited in the Bank of Ireland. The year before the amount was $220,934,233. The balances in the post-office savings banks were $47,920,425, against $46,460,475 the year previous. In the postal savings banks and the trustees' savings banks together there were $59,867,683, against $58,417,466 the year previous. This is the highest amount ever recorded. The increase in the last six months of 1904 was nearly $10,000,000 more than during the previous half year, but $647,244 below the average semiannual increase for the previous 21 half-year periods.

SCOTLAND.

EDINBURGH'S WATER SUPPLY.

COMPLETION OF A TEN-MILLION GALLONS RESERVOIR.

Consul Fleming, of Edinburgh, Scotland, reports the completion of a new reservoir, which increases the water supply of that city by 9,655,000 gallons per day. The construction of this reservoir involved great engineering difficulties, and occupied ten years. Consul Fleming writes:

When about fifteen years ago the inadequacy of the water supply of Edinburgh became apparent, it was resolved to construct a large reservoir in the valley of the Talla River (one of the headwaters of the Tweed), 35 miles south of Edinburgh, where the gathering ground amounts to 6,180 acres, or about 10 square miles. Work was begun on this water scheme ten years ago, and it is now completed. The new reservoir has a water surface of 297 acres and a storage capacity of 2,750,000,000 gallons. The embankment thrown across the valley from hill to hill to dam this flood is 1,300 feet in length and 90 feet high from the river bed level, having a base of 600 feet in breadth and tapering upward to 20 feet at the top. The high-water level in the reservoir is 950 feet above sea level.

To carry off the river and flood waters during the construction a tunnel 400 yards long was driven through hard rock in the hillside near one end of the embankment, and subsequently was lined with brick. In this tunnel there have now been laid the pipes which take the water to the measuring house farther down the valley. A 36-inch pipe, which carries the compensation water to the stream is laid on the bottom of this tunnel. There are three levels at which water may be drawn off for Edinburgh, each controlled by a 24-inch valve, worked by hydraulic power, and the necessary shafts are situated along the line of the discharge tunnel. The waste weir, 200 feet in length, built of solid masonry, is capable of passing large floods. The length of pipe track between the measuring house and the filters (near the city) is more than 35 miles. It includes 9 miles of tunnel and 12 miles of what are known as cut and cover aqueducts, the remainder being bridges and cast-iron piping. There are altogether 21 tunnels, the longest of which is 1¾ miles, and the shortest 133 yards. Cast-iron pipes are used for the syphons across valleys. For the benefit of future generations the engineers recommended that the new aqueducts should be made to carry not 10,000,000 gallons a day (which would be sufficient at

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present and for many years) but 20,000,000, and that was accordingly done. For the conveyance of material to the reservoir while under construction, a railway 9 miles long was built, at a cost of £64,957 ($316,113.24).

It is estimated that this reservoir will add at least 9,655,000 gallons per day to the Edinburgh and district water supply, bringing it up to 25,000,000 gallons per day, equal to 55 gallons per head per day to a population of 455,000. The first estimate of the total cost of the Talla water scheme was £750,000 ($3,649,875). The expenditures actually incurred amount to £1,143,290 ($5,563,820.79). The cost has been met by issues of water trust bonds, redeemable by means of a sinking fund provided for out of the water rates.

WALES.

GOOD OUTLOOK FOR UNITED STATES PRODUCTS—IMPROVED BUSINESS METHODS NEEDED.

Consul Williams, of Cardiff, calls attention to opportunities in Wales for the sale of United States products of many kinds, particularly foods and tools, mining tools and machines. The report follows:

Cardiff, which is the largest town in Wales, is the principal port of entry for South Wales and the Severn Valley in western England. It and its dependencies, Penarth and Barry, have a population exceeding 200,000. Its docks are equipped with all modern appliances. The imports for several years past have been about or in excess of 2,000,000 tons annually, and the completion of the large new dock next year will increase that tonnage very materially. One instance will illustrate better than a dozen tables how Cardiff handles the import trade. The liner *Nairnshire*, 4,288 tons register, 10,000 tons dead weight, which left New Zealand July 4, arrived at the Barry Docks September 22, with 62 passengers and a cargo consisting of 10,000 carcasses of sheep and lambs, 2,000 cases of rabbits, and a large quantity of wheat. A special train brought the passengers to Car diff whence they were sent to their destinations in different parts of the island the same day. The meat was transferred to the warehouses of the Cardiff Ice and Cold Storage Company without delay, and the wheat was quickly unloaded at Messrs. Rank's mills, conveniently situated for receiving imports. Another cargo of frozen meat from New Zealand will arrive the first week in October.

CARDIFF CENTER OF INDUSTRIAL REGION

Cardiff, being the metropolis of a great industrial region, offers a fine market for all classes of food stuffs. The greater part of the cargo of the *Nairnshire*, already noted, was consigned to South Wales merchants, and Wales buys large quantities of food stuffs imported at Liverpool and other ports. It would be to the advantage of importers of American products to send them to Cardiff direct, but a differential freight rate now causes them to be sent to other ports. For instance, the ocean rate on flour is $14.62 from New York and $12.50 from Baltimore, while it is only $7.03 from New York and Boston and only $9

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from Baltimore to Liverpool. All food products command high prices in South Wales, butter retailing for 26 cents up a pound, eggs about the same price per dozen, and the majority of other products in the same proportion.

Cardiff offers opportunities for many kinds of American manufactures. Mining is the principal industry, and there is a steady demand for tools, machinery, various iron and steel goods, and steam and electrical appliances, etc. Take the one item of coal-cutting machines, there were only nine machines in use in all South Wales last year, viz, two Champion Percussive, two Diamond Disc, two Hurd's Bar, and two Paterson's Bar, all using compressed air. In addition to the above, there were three Champion Channelling machines at work in one colliery ripping down roof. It would appear that many coal-cutting machines could be introduced in this territory. The majority of the mines are located in narrow valleys, which makes necessary the hauling of rubbish to the hilltops for dumping, and a few companies are now introducing electric appliances for this purpose. New mines and new iron furnaces are contemplated, and each of these offers openings for the most modern American inventions.

BETTER BUSINESS METHODS NECESSARY.

To introduce American goods necessitates the adoption of better business methods by Americans. To quote the Spectator, "the Englishman has a natural distrust and dislike of what is new." He has had some experience with "new" things from America, and his attitude is perfectly natural. The practice indulged in by some of shipping seconds and "culls" for sale in Great Britain has done great harm to the conscientious importer in two ways, first by buncoing the buyer; second, by giving prejudice an excuse and an opening to injure all American trade. It may be noted also that the American advertising methods are not understood here, and much of the money spent on advertising literature is wasted. There should be English editions to all catalogues and advertising circulars, using English spelling, English business expressions and phrases, as well as measures, weights, and money. It is ridiculous to expect an Englishman to buy a dictionary of Americanisms in order to understand a catalogue. Furthermore, abbreviations should be avoided, every article should be illustrated, and net prices in England should be quoted.

It is well to remember, however, that it requires salesmen to sell American manufactures in Great Britain. These salesmen should be qualified. They should know everything about the articles they sell, and all about the English system of buying, credit, etc. They should leave all their bristling American ways at home, and should be equipped with a store of patience and time. The English business man will not experiment with goods or machinery until convinced that it will pay him to do so. The one item to be emphasized above all others is the durability of the article sold. This is regarded of much more importance here than in America, where the desire for the latest in everything is paramount. Cheapness is a recommendation, other considerations have weight, but it is durability that sells the manufactured article here.

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DEFICIENT POSTAGE.

One small item, too often overlooked by American shippers, is postage. A small bill of goods was shipped by a large firm to this district recently, and when the statement was mailed the mailing clerk inserted a circular doubling the weight and then put on only a 2-cent stamp. When the buyer received the statement he had to pay the postman 8 pence, or 16 cents, for underpaid postage. Pence count in England and Wales, and this did not put him in a happy frame of mind to peruse the statement. In another instance brought to my notice the postage collected was 10 pence, or 20 cents. Americans should remember that twice the underpaid postage is always collected in Great Britain. Remembering this, they will be more likely to have attention paid to their catalogues and circulars mailed to British merchants.

If American manufacturers wish to win and hold a place in the markets of the world against all competition, it would be well for them to establish a commercial university, teaching the languages of all nations whose trade is worth winning, as well as their trade systems, business methods, traits and characteristics, and all else requisite to enable an American to compete with the native salesman. Such commercial agents would be an invincible standing army, irresistible in business, and making for world peace.

THE FOOD SUPPLY.

REMARKABLE EFFORTS OF ENGLAND IN THE SOUTHERN HEMISPHERE.

Consul Williams, of Cardiff, reports a remarkable order for steamships designed for trade with India and South America, in which parts of the world Great Britain hopes to be able to find sources of food supply to take the place of the United States. The report follows:

Notwithstanding the depression in shipping, Cardiff ship owners have placed orders for 12 new steamers with north country builders since August 1, 1905. The vessels will range in dead weight capacity from 5,000 tons upward, the largest to be 7,500 tons and to cost £39,000. Three of the steamers will be of the turret type, with a dead weight capacity of 6,200 tons. The orders placed will aggregate a capacity of nearly 80,000 tons, and will require an investment of £500,000.

As indicated, the tendency is to order steamers of the larger type. Two steamers of 9,000 tons are now owned in Cardiff, and another firm is considering specifications for a steamer of 10,000 tons. This is due to the fact that there is economy in working large steamers so long as full employment can be secured. But where can such large tramp vessels find cargoes?

ENGLAND ON EVE OF GREAT CHANGE.

To the outsider this boom in shipbuilding is incomprehensible, but it is evident that many ship owners believe that British shipping is on the eve of a great change. They reason thus: The falling off in imports from the United States has forced Britain to seek food products elsewhere—in India, South America, and Australia—and these large steamers are built in order to preempt a large share of that far-away

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trade. In order to understand the growth of that trade it should be noted that India furnished the largest percentage of the wheat imports in 1904, followed by Russia, Argentina, and the United States in the order named. This was a complete reversal of the order of 1901, when the United States furnished 66.2 per cent of the total wheat imports. The change in the relative standing of these great wheat sellers is indicated by the following table:

	1901.	1902.	1903.	1904.
United States	66.2	60.2	40.0	15.7
India	3.3	8.2	14.6	21.6
Russia	2.5	6.1	14.8	20.1
Argentina	8.2	4.2	12.2	18.5

The United States still holds the lead in live cattle and sheep, but Argentina is a close second in beef shipments. In 1904 it sent 1,422,397 hundredweight of fresh mutton to 4,148 hundredweight furnished by the United States. The share of the last-named country in other food imports is quite small and decreasing, for it sent less than 9 per cent of the cheese, only 1.6 per cent of the butter, less than 0.8 per cent of the eggs, and only 0.1 per cent of the condensed milk imported in 1904.

The import trade from the United States has not been very profitable to British shipping in recent years, because the United States is buying less and less abroad. On the other hand, the new trade with India and the Southern Hemisphere will pay both ways, because those regions are heavy buyers of British goods, exchanging their own raw materials for manufactured articles.

The firm establishment of this new trade relation on the part of British shipping may affect American interests injuriously, by making it more difficult to build up an American merchant marine and by establishing a freight differential which in time will shut American food products out of the British markets.

Consul Mahin, of Nottingham, writes that frequent complaint is made that the British coal-export trade is languishing, especially in the direction of France. The probable explanation is found in a recent statement by Sir Charles Maclaren, that two-thirds of the total output of Germany's mines is controlled by the Rhenish-Westphalian Coal Syndicate, which, in order to encroach upon British export markets, is paying a bounty of from 24 to 36 cents a ton on exports to Marseille and Nantes. As to British coal exports, not only do they receive no subsidy, but they are required to pay a Government tax representing from 12 to 15 per cent on the pit price of the coal.

Irish newspapers report that about 700 tons of tobacco are being dried in the department of agriculture's tobacco barn at Lough Cross, Broadway, Wexford, as an outcome of a scheme started by Conan Doyle. Several farmers in the locality have an acre each under tobacco, and it is confidently expected that the experiment will prove a success.

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GERMANY.

THE MEAT-SUPPLY PROBLEM.

GENERAL REVOLT AGAINST HIGH PRICES—DEMANDS FOR REMEDIAL MEASURES.

Consul-General Mason reports a serious revolt on the part of the German people against paying high prices for meat. He writes:

It was inevitable that the elaborate and complicated system of inspections and prohibitions which was imposed upon the importation of meats and domestic animals by the new meat-inspection law of Germany, which went into effect a few months ago, should have the effect which its authors intended, to increase the prices of pork, beef, veal, and mutton, by diminishing the available supply. The law was enacted through agrarian influences under the pretence of protecting the public from the sale of diseased or unwholesome meats, and of defending the flocks and herds of the Fatherland from contamination by diseased cattle, sheep, and swine imported from abroad. In the debates which preceded the passage of the law it was easy for the agrarian statesmen to assume that, because a few cases of Texas fever existed among southern and western cattle, live stock from the United States should be excluded from Germany. Similarly, because cases of foot-and-mouth disease were known to exist in Russia, Denmark, and Sweden, it was urged that cattle from those countries should be likewise denied admission.

The question was asked by the opposition, What would become of the working people's meat supply under the proposed restrictions? to which the friends of the measure replied that the German farmers would look after that; they would immediately increase their product of meat-producing animals so that the hitherto imported meats and cattle and swine would never be missed. So the law was enacted, and, as soon as the requisite equipment of inspectors, inspection houses, veterinary surgeons, instruments, examiners, etc., could be provided, it was put into effect with the rigid and straightforward thoroughness which is characteristic of German administration.

EVIL EFFECTS OF HIGH PRICES.

The effects, which were soon apparent in the greatly decreased imports of live stock and meat supplies, have now developed into a situation which is regarded as gravely serious. A telegram from Kattowitz, on the Russian frontier, recently published in a press report, states that the agricultural live-stock association, which controls the importation and distribution of domestic animals for breeding and other purposes, has ordained that their shipments of swine to Upper Silesia, the price of which was fixed on July 21 at 52 marks ($12.37) per centner (110 pounds avoirdupois), shall in future not be less than 60 marks ($14.28) per centner, which would be about 13 cents per pound avoirdupois, live weight, for hogs. Fresh pork now sells at retail by leading meat dealers in Berlin meat stores for 24 cents per pound, beef steaks and roast for 35½ cents, veal for 35 cents, and mutton for 28½ cents per pound. These are prices quite beyond

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the reach of most working people in the great, busy city, and their clamor and protests are so urgent and indignant that the meat dealers have been compelled, in self-defence, to post in their stores notices stating that the high prices of meats are not due to their own rapacity, but to the enhanced cost and limited supply of meats and meat-producing animals, caused by the meat-inspection law. In other words, that the Government is alone responsible.

PROTEST MEETINGS HELD.

At the same time the national association of hotel and restaurant keepers have met and addressed to the imperial chancellor a joint protest, in which they state their case with great earnestness and present an eloquent array of facts. They declare that meat has become to the German middle and working classes no longer an element of daily food, but a luxury, and that in consequence of the exorbitant cost of meats, hotels and restaurants are compelled to either advance their prices at the risk of losing their customers, or cut their margin of profit so close that the safety of their business is seriously endangered. They point out that of all European countries Germany has now the highest prices for ordinary market meats.

It has been customary until quite recently to attribute these advancing rates to the rapacity of butchers and meat dealers, but the hotel and restaurant association have thoroughly investigated that subject, and find that so far from making increased profits, the butchers and meat merchants are in serious difficulties, and a large number of firms in both classes have given up the fight and announced to the tax authorities their intention to relinquish their business. In the city of Frankfort-on-Main alone 33 meat stores have either been closed or have been announced as about to be closed by reason of the destruction of their trade by the scarcity and high prices of meats.

THE QUESTION OF REMEDIES.

As to remedies, the memorial respectfully leaves that mainly to the wisdom of the chancellor, but ventures to suggest that as the home-bred supply of cattle and hogs has proven so notoriously deficient, the frontiers of at least Austria and Denmark should be opened, and animals from those countries, in which there is no longer even a pretense of epidemic danger, shall be allowed free access to German markets. This suggestion is to be confirmed and put into the form of an insistent demand by a great concourse of master butchers, which has been called to meet in Berlin in the first days of September. The call for this mass meeting states that a continuation of the present restriction to the importation of meat-producing animals will complete the ruin of their industry, and the motto of their congress will be "Open the frontiers!"

Still another movement in the same direction is an appeal to the imperial ministry from the magistracy of Upper Silesia, an agricultural and mining region hitherto dominated by extreme Agrarian sentiments, to double the number of swine which are permitted by law to be entered annually from Russia. The appeal recites that in consequence of the exorbitant cost of meat, miners, ironworkers, and factory operators demand increased wages, which, being refused, they

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resort to strikes and dissensions, which have greatly compromised the relations between employers and employed, and impaired the ability of German operators and manufacturers to produce cheaply and maintain their position as exporters to foreign countries. The reduced meat supply has been particularly severe on the miners of Upper Silesia who, by reason of their severe labor under arduous conditions, have been weakened and rendered less efficient by the diet of inferior substitutes to which they have been driven by the exorbitant cost of the meats to which they had been long accustomed.

INSISTENT DEMAND FOR MODIFICATIONS.

Thus from various sources, all more or less influential, comes an insistent demand that the German Government shall modify the exactions of the meat-inspection law and thereby acknowledge that the step taken after long debate and consideration, as a concession to Agrarian demands, was an economic mistake and has been to a large extent abortive in its result. What the Government will do in the matter remains to be seen. The whole subject will be brought before the Reichstag at its coming session, when a determined attempt will be made by the representatives of manufacturing and commercial interests, reenforced by the hotel and restaurant keepers' association, to secure some important modifications in the present meat-inspection law and the system of inspections and exclusions which is based thereon.

ACTION OF BUTCHERS IN MASS MEETING.

The national mass meeting of German butchers and meat dealers, which was announced in a recent report from this consulate as having been called to take place at an early date, assembled at Berlin at the time fixed. It brought together about 2,000 representative men in that branch of food production. After a day of earnest discussion a resolution was unanimously adopted declaring the present supply of meat-producing animals in Germany to be wholly insufficient for the needs of the people, the quality of such animals in the market inferior and steadily becoming worse, and their cost and the consequent prices of meats so exorbitantly high as to constitute a public calamity and menace to the health and industrial efficiency of the laboring classes. The resolution closes with an urgent and peremptory appeal for the opening of the frontiers of the German Empire—which are practically closed by the present meat-inspection law—to the free importation of cattle and swine, under only such sanitary and veterinary regulations as the real protection of German flocks and herds from contamination, and the public from the danger of diseased or impure meat, may definitely require.

MARKET VALUE OF ANIMALS.

The feature of the meeting which will perhaps justify this brief review of its proceedings is the definite and authoritative exhibit which was made of the degree to which the market values of meat-producing animals has been increased in Germany by the influence of the meat-inspection law. Beginning with the statement that in other European countries the prices of meats and domestic animals are not now unusu-

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ally high, the memorial goes on to declare that according to the reports of the imperial bureau of statistics—certainly a conservative and unbiased authority—during the winter months of 1900 the average wholesale price of live hogs was $21.42 per 220 pounds, whereas they are now scarce and difficult to obtain at $30.94, or more than 14 cents per pound avoirdupois. Fat oxen, which cost on an average, in the period from January to March, 1900, $24 per 220 pounds, are now scarce and of inferior quality at an average cost of $32.75, or about 15 cents live weight per pound avoirdupois. Fat cattle of superior quality are still higher. Calves have likewise risen in price from $31.65 to $39.03 per 220 pounds, and lambs from $25.70 to $32.50 per centner. The memorial will be laid before the ministry of the interior and, if satisfactory action is not taken in the form of a ministerial decree, the subject will be brought before the Reichstag at its coming session, with a view of repealing or radically modifying that portion of the present meat-inspection law which regulates and restricts the importation of meat-producing animals.

APPEAL TO THE GOVERNMENT.

ADMISSION OF FOREIGN CATTLE DEMANDED.

Relative to the scarcity of meat in Germany and the demand for the removal of the duty on cattle and hogs, Consul Albert, of Brunswick, writes:

At this season there are general complaints in Germany by butchers of the scarcity of cattle and hogs, and by consumers of the high prices of provisions; but this year the outcry is more widespread, and the demand for the removal of the restrictions on the admission of cattle and hogs across the boundaries between Germany and adjacent countries is more pronounced than usual.

The city council of Brunswick on August 24 adopted a resolution requesting the city magistracy to address a petition to the State government to instruct the representatives in the National Bundesrath to take immediate action in regard to the abolishment of the restrictions against admitting cattle across the boundaries of adjacent countries, in order to put an end to the universally admitted scarcity of meat. In support of the resolution the councilman who presented it said that in the last few months the prices of meat had considerably advanced. The entire press, with the exception of that in the interest of the agrarians, had united in a demand that the boundaries should be opened to the admission of foreign cattle.

COMPARISON OF PRICES.

A comparison of the prices now paid by butchers for live cattle per hundredweight (110 pounds) with those of last year shows:

Description.	1904.	1905.
Calves	$15.47 to $19.04	$16.66 to $21.42
Cattle, live	14.28 to 15.47	17.85 to 20.23
Hogs	13.00 to 14.28	15.47 to 16.66
Sheep	14.28 to 15.47	17.85 to 20.47

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The retail prices were on the average about 5 cents higher per pound. Nevertheless the governments of the different States refrained from action from fear of introducing cattle diseases. That the high prices of meat caused insufficient nourishment of the people is shown in Silesia, where famine typhus prevailed.

ACTION BY VARIOUS CITIES.

Action similar to that of Brunswick has been taken by other German cities. On or about the same date, at Munich, a popular meeting of the middle class party adopted a resolution protesting against the meat-inspection law, the closing of the boundaries against provisions, and demanding the admission of live hogs from Austria and Italy, under prescribed measures of safety against cattle disease, so long as the present cattle and meat crisis lasted. At Leipzig, a largely attended popular meeting demanded in a resolution the opening of the boundaries for the admission of cattle in order to diminish the scarcity of meat.

The Hamburg newspapers announced that twenty-nine communities in northern Schleswig had protested against the increasing scarcity of meat. In Dortmund, the city magistracy addressed a petition to the competent authorities, representing the necessity of opening the neighboring boundaries of Holland and Denmark for the import of live hogs and the removal of restrictions against their admission. At Darmstadt, the city council unanimously adopted a resolution requesting the State government to instruct the representatives in the National Bundesrath to take action in regard to the abolishment of boundary restrictions. At Nürnberg, in a public meeting, a resolution was adopted protesting against the policy of advancing the prices of meat, and demanding the unrestricted admission of cattle under sufficient veterinary control. At Stuttgart, the city council adopted a resolution, with only one negative vote, requesting the State government to use its influence in the Bundesrath to have the importation of cattle made free; the introduction of cattle diseases to be prevented by sanitary measures which would not block the boundaries against the admission of cattle and thereby producing great injury to the laboring classes by the high prices of meat.

ACTION BY HOTEL KEEPERS.

The North German Hotel Keepers' Union, at a meeting in Hamburg, addressed a petition to the imperial chancellor in which they set forth the great damage which was being done the hotel business by the scarcity of meat and asked for help by the increase of the import contingent. At Berlin the German Hotel Keepers' Union, the Association of German Hotel Keepers, the League of Restaurant Keepers of Berlin, and neighborhood, the Berlin Hotel Keepers' Guild, and the Union of Hotel Owners addressed a joint petition to the imperial chancellor and other ministers. The same petition will be laid before the Reichstag. The petitioners state that a comparison with the meat prices paid in other countries will show that they pay the highest prices in all Europe for their chief article of nourishment. According to statistics during the last five years, the average prices of meat paid at the capital of the Empire far exceeded for beef or pork the average of all the capital cities of the surrounding countries, except that of Russia.

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GOVERNMENT DECLINES TO ACT.

After the imperial chancellor had declared his inability to comply with the wishes expressed by the mayors of cities in Upper Silesia to increase the Russian swine contingent, they addressed another petition to him in which more urgent grounds were given for their complaints, with the request that their petition be submitted to the entire State ministry for discussion. In reference to the refusal to entertain their request on the two grounds of danger from cattle disease and damage to the agricultural interests, they allege, as to the first ground, that no case of Siberian pest had been officially established and that the crossing at Sosnowice was under strict control. The second ground was not tenable, because the attempt of the cattle centers to meet the demand had failed, for in four weeks only 1,937 swine had been delivered, which only weighed from 210 to 220 pounds each, and one-fourth of them were affected with tuberculosis, were watery and were of inferior quality. The discontent had increased and the use of meat by the working classes had fallen 30 to 33 per cent. The management of one mine already obtained offal from preserving factories and thereby increased the danger of disturbances.

PRICE OF POULTRY INCREASED.

In conclusion the governing committee of the International Association of Hotel Owners of Berlin, as representatives of an important group of German consumers of agricultural products, submitted in a petition their views and wishes as to the question of the high prices of meat. They state that in consequence of the scarcity of meat, there had been a considerable advance in the price of poultry. On account of the high prices of pork the farmers preferred to sell their hogs and to eat their poultry themselves instead of the reverse. The geese and chickens now on the market were imported from Russia, Galicia, and Hungary. Geese cost 24 cents and young chicken 7 cents more than last year. Boiling chicken which formerly at this season cost 30 to 34 cents, now cost 54 to 60 cents.

Potatoes and eggs had also increased in price. All these advances weighed heavily on the business of hotel and restaurant keepers, who were unable to change their prices in conformity with market conditions, as the entire population would revolt. The petition concludes with the request for a slight modification of the boundary restrictions so that cattle can be admitted under proper sanitary regulations, preventing the introduction of diseases.

HORSE AND DOG FLESH CONSUMED.

A press dispatch from Berlin, dated October 11, says:

There is much evidence to show that Germany's meat famine is growing worse. Reports from all parts of the country make mention of the measures that are being taken to abate the famine. At Eisenach a conference of the municipal authorities in that region decided to establish regular rabbit markets, and in the municipal public markets also rabbit stalls have been opened. Since horse flesh has risen in price and dog flesh is no longer obtainable, a number of municipalities are buying carloads of sea fish at the coast towns and selling them at cost to citi-

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zens. This expedient was first adopted at Solingen, but has now spread to various Westphalian cities, to Posen, and even to Bavarian towns.

The latest Government statistics show that the price of meat is still rising. The September report shows that some kinds rose during the month a cent and a half a pound.

At a conference between the burgomasters of Berlin and other important towns it was voted to appeal to Prince von Buelow, the imperial chancellor, to take measures to alleviate the condition, since previous petitions made to Prussian Minister of Agriculture Podbielski had been unavailing.

CONDITIONS IN BADEN.

SCARCITY WIDESPREAD AND PROGRESSING.

Consul Brittain, of Kehl, in Baden, describes conditions existing in that portion of the German Empire regarding the scarcity of meat in the following brief report:

According to a recent issue of the Strassburger Post the average increase in price per kilogram (2.20 pounds) is 5 pfennigs (1¼ cents) for best quality of beef and 1¼ cents for second quality of beef; for veal 1¼ cents, for mutton 1 cent, and for pork 2½ cents. In connection with this increase in the price of meat it can be mentioned that butter has consequently been raised 2 cents per 2.20 pounds and eggs 5½ cents per schock (60 eggs). In many cities milk has been advanced in price, and in others a raise of one-half to 1 cent per liter (1$\frac{1}{10}$ quarts) went into effect October 1.

The highest price of pork was found to be in the city of Aachen, where 50 cents per kilogram prevailed; in Hanau 47 cents, Coblenz and Neuss 45 cents, and in Trier and Breslau 43 cents. Many petitions have already been presented to the Government for a temporary suspension of the tariff on meat and meat products, and petitions have also been presented to the city authorities where the octroi, or local, duties are in force to have such temporarily suspended.

There is a strong feeling and desire that the conditions should rapidly improve, and that before the winter period arrives, for the anticipations are that the scarcity of meat will have socialistic tendencies and produce disturbed conditions in the country. Should the conditions improve it is even feared that the present high retail prices of meat would be retained for an indefinite period. If the tariff and duties should be temporarily suspended it may be of advantage to our cattle dealers and packers to watch this movement and be ready to supply the great demand for meat products here in Germany.

EUROPE MUST HAVE MEAT.

IMPORTANT STATISTICS OF VARIOUS COUNTRIES.

Consul Winter, of Annaberg, reporting on the need of meat in European markets, furnishes some interesting figures about the number of cattle, sheep, and hogs in some of the world's best stocked countries. He says:

The United States, Argentina, Australia, and Canada practically furnish the surplus meats for exports. Distance and the available

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amount of live stock form the factors in this export trade. The relatively greater proportions of live stock to population is found in the countries which are farthest from the big markets. The United States is nearest to Europe. This country has 60,000,000 head of cattle, 62,000,000 hogs, and as many sheep to, approximately, 85,000,000 people. Australia and New Zealand are the farthest from Europe, and have 11,000,000 head of cattle, a few hogs, and 112,000,000 sheep to less than 4,500,000 population. Argentina has 27,000,000 cattle and about 110,000,000 sheep to a population of about 5,500,000 people.

EUROPE COMPELLED TO IMPORT.

The fact that the overcrowded nations of Europe must import foreign flesh foods is based upon the scarcity of their home supply. Russia in Europe, for instance, has only 24,000,000 head of cattle and 35,000,000 sheep for a population of over 90,000,000, and no other nation on the Continent has as large a supply of live stock as Russia, though Germany and France have as many, if not more, per head of population. Great Britain and Ireland have only about 11,000,000 head of cattle, 6,000,000 hogs, and 34,000,000 sheep for a population of nearly 43,000,000.

It is evident that Great Britain, more than any other European nation, must look elsewhere for her meat supply. Importation of meats is a necessity, not only for Great Britain, but also for all Europe, which will always need meat. It behooves American meat producers to lose no opportunity to promote their interests in these foreign markets.

PUBLIC UTILITIES.

MUNICIPAL OWNERSHIP IN A MODEL GERMAN CITY.

Consul Liefeld, of Freiburg, reports a remarkable degree of city ownership and control of public utilities in Germany. The details of what has been done and is being done is worthy of careful study. He writes:

Freiburg, a city of about 70,000 inhabitants, in the Grand Duchy of Baden, about 36 miles north of Switzerland, is situated on the main railroad line of travel from Berlin or Hamburg via Frankfurt to Switzerland and Italy. It has of late become a railroad center, with roads extending to Alsace and the Vosges Mountains, on the one side, and into the beautiful Black Forest Mountains, on the other. Freiburg believes in the municipal ownership of every enterprise possible, perhaps even more so than any other city in continental Europe. It has followed this idea for many years. The city railroads, the gas, electric light, water, theater, slaughterhouse, pawn shop, savings bank, schools, cemetery, etc., even building lots, forests, and vineyards, and a daily newspaper, are all controlled by the city, and are not necessarily managed for profit, but for the benefit of the inhabitants.

ANNUAL RECEIPTS AND EXPENDITURES.

The annual report for the city (receipts and expenditures) during the fiscal year 1904 was published in July, 1905, and I herewith quote a few facts and statistics from the same:

The value of the public buildings, schoolhouses, etc., amounts to

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$2,091,568. This property is covered by insurance to the amount of $1,340,868. The fields, meadows, gardens, vineyards, etc., within the city limits or in the surrounding towns are valued at $3,728,151. The value of the furniture and other furnishings of the buildings and land, of the books in the libraries, contents of the museum, fire department apparatus, etc., amounts to $225,425. Besides these, there are bills due the city and cash on hand, etc., so that the property owned by the city and recorded in the treasurer's office is valued at $6,145,570. The indebtedness of the city amounts to $7,178,804.55, which means a net indebtedness of $1,033,233. It is claimed, however, that the values stated are far too low, and that if a fair valuation were made, governed by the prices that could be obtained were the various pieces of property offered for sale, the real value of the possessions of the city of Freiburg would be $15,124,355, which would mean a net surplus of $7,570,812.

INCOME AND EXPENDITURES.

The garbage is collected several times a week by city workmen and disposed of by the city. The receipts in this department for the fiscal year 1904, including rent of buildings and land, sale of manure, etc., amounted to $12,744. The expenses for management of this department, including salaries, fuel, stationery, traveling expenses, etc., were $9,400. There were other expenses for new purchases, repairs, extra horses, and help, but this department turned over to the city treasury $517, not an uncommon thing in German cities.

The receipts for the benefit of the poor amounted to $58,008, including the various charity funds of private citizens. The disbursements amounted to $57,004, leaving a surplus of $964.

The receipts amounted to $68,445; disbursements, $66,549; surplus, $1,896.

ELECTRICITY AND GAS.

The receipts from electricity include the house rent from the director and the master machinist, as also the income for (*a*) electric light for private parties, $25,324; public purposes, streets, etc., $3,727; (*b*) power from private parties and institutions, $5,699; for city electric cars, $20,781; (*c*) for use of meters, $2,702, etc.; total receipts, $85,451; disbursements, $82,003; surplus, $3,478.

The account for the electric railroad alone was: Receipts, $135,360; disbursements, $132,160; surplus, $3,300.

In the city's department for illuminating gas the total receipts were $302,009 and the disbursements $298,428.

BURIALS AND INSURANCE.

The cemetery is owned and controlled by the city. Funeral processions do not take place in the city, but only at the cemetery. Receipts therefrom, $33,849 (from burials, $10,176; sale of burial lots, $8,207; fees for transportation of bodies of deceased to the cemetery chapel, which is done on the day of death, $5,436; sale of caskets to neighboring towns, $2,279). The cemetery accounts show that $13,440 was turned over to the city treasury in 1904.

The receipts from city invalid insurance include amount forwarded from account of preceding year, also the interest on deposits, etc., but

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are mainly derived from the tax of $2.88, which must be paid for above purpose quarterly, $11.52 per year, for every servant in a family. This amounted for the year in Freiburg alone to $14,932. This tax is collected by imperial law for each servant in the whole German Empire. The tax can be paid in part by the servant and either in part or whole by the employer. In case of sickness the help are attended tree by specially appointed doctors; in case of necessity they are freated free at the hospitals.

The expenditures included $2,099 for medicines and medical appliances and $10,102 for local clinics and hospital. Total receipts, $42,177; expenditures, $42,119; surplus, $58.

MUNICIPAL PAWN SHOP.

Receipts, including interest on capital, $30,516; expenditures, $30,295; surplus, $221. On December 31, 1903, there were in bond 8,295 pawned articles, on which the city had loaned $20,866. During the year 1904 13,506 articles were pawned by citizens, on which loans amounted to $24,256; making a total of 21,801 articles, representing loans of $45,121.

During the year there were redeemed 11,796 articles on payment of $21,897; 1,592 articles were forfeited and sold at auction, bringing $2,831, making a total of 13,388 articles and $24,727 for 1904, and leaving on December 31, 1904, 8,413 articles, representing loans of $20,394.

MILITARY AND MUSIC.

The receipts here were mostly as rentals, for the buildings owned by the city are rented by the military administration, and the expenditures consisted chiefly in taxes on the buildings. The payment into the city treasury from these buildings amounted to $65,892. The value of this property is estimated at $564,728.

The city orchestra, engaged and paid by the city, plays at operas and plays four or five times each week for seven months of the year, giving 128 regular performances and a few extras. During the five months, from May to September, concerts are given at the city park three evenings and four or five day performances each week, with two weeks' vacation to the orchestra. At the opera house the regular price of admission varies from 40 pfennigs (9½ cents) to 3.50 marks (83 cents) for each performance, with a reduction to persons buying season tickets. At the summer concerts the price of admission varies from 7 to 14½ cents (Sunday afternoon free). To season ticket holders $2.38 for one person, $3.57 for family ticket, and $1.19 for students, etc. Besides the foregoing, the orchestra in the winter season gives a series of six symphonic concerts. The receipts in this department amounted to $23,766 (symphony concerts, $2,292; theater, $12,614; city park concerts, $1,856, etc.).

The surplus amounted to $288, the expenditures having been $23,480 (salary of first conductor, $1,190; second conductor, $714; 1 concert-master, $500; 1 harpist, $452; and 40 other musicians, $15,227, etc.).

MISCELLANEOUS UTILITIES.

The pension fund for pensioned officials, teachers, widows, and orphans showed receipts and expenditures, each amounting to $11,552, but the city contributed $2,288.

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The sewerage of Freiburg is conducted to irrigated fields, the so-called "Rieselfelder," a few miles away, which are under cultivation. The receipts and outlays were each $65,423. Among the receipts were $12,666 from agricultural products which, on account of storms, were unusually small; milk, $11,829; manure, $1,973; sale of cattle, $11,300, etc. Among the expenditures were: Fodder, $15,084; purchase of cattle, $12,518; wages, $5,469. The value of these fields was estimated, on December 31, 1904, at $214,432.

According to law, all larger animals can be slaughtered only at the slaughterhouse, and special fees are collected, which in 1904 amounted to $23,074. The total receipts, including $714 for rent for restaurant, amounted to $44,798. The net receipts were: To the city treasury, $4,211; to the reserve fund, $2,550.

From the city gardens the receipts amounted to $7,173, including $4,323 for admissions. Expenditures for plants, etc., $603; for animals, $217; for music during the two weeks' vacation of the city orchestra, $369, and $1,850 paid to the orchestra fund.

DUTIES AND COLLECTIONS.

The total receipts of the theater amounted to $89,837 (season tickets, $15,923; single tickets, $10,711; extra performances, $7,414; from city treasury, $32,606). The theater is not made self-supporting, but is considered a necessary and essential element for educating the people, and, as the mayor stated to me some years ago, the city would as soon think of managing its schools at a profit as to manage a theater at a profit, for which reason the city is willing to contribute such a large amount ($32,606) annually toward the support of its theater. Among the outlays are: For the management, $4,053; for singers and actors, $38,384; orchestra fund, $5,474.

Freiburg collects duties on food articles which are brought into the city or produced here. The collections for 1904 amounted to $91,808 (wine, $9,748; local beer, $25,264; beer from other towns, $14,982; flour, bread, etc., $15,012; cattle, $17,231; fish, $2,891; meats, $2,293; venison, $1,512, and fowl, $1,681). On the expense side there were amounts refunded because, in the proper order of business, certain food products which had been brought into the city and paid "octroi" were exported, viz, beer, $14,753; for flour, bread, etc., $1,060; meats, $193; fowl, $138; fish, $270. The amount from the "octroi" paid into the city treasury in 1904 was $71,600.

KITCHEN, WATER WORKS, AND SCHOOLS.

There is a so-called "Volkskueche" or people's kitchen here, the receipts of which during 1904 amounted to $27,816. A large share of the amounts received at the people's kitchen was for little things, viz, buns, at .007 cent each; soup, at 1.4 cents a bowl; coffee, at 1.7 cents per cup; supper, at 4.8 and 5.9 cents; dinner, at 5.9 and 7.1 cents.

The total receipts in the water department were $113,827, which, however, included $12,559 received for extending the water system throughout the city. The water department paid to the employees $5,366, and into the city treasury $71,315.

The schools of Freiburg are not wholly free, except those intended for the poor, but the moneys paid by the pupils are not sufficient to

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pay even the current expenses, and both State and city contribute freely toward their support. As an example I take the highest school for girls, where the fees from the pupils amounted in 1904 to $10,261, but the State contributed $2,380 and the city $15,450. The salaries for the regularly appointed teachers amounted to $13,731 and the allowance for their house rent to $3,518. Salaries of other teachers than those regularly employed amounted to $11,997.

One of the boys' high schools (Oberreal Schule) received $9,613 from the pupils as tuition fees, from the State $13,127, and from the city $19,148, and among its expenses were salaries for the regularly appointed teachers, $20,984, allowance for their rent, $5,414, for other teachers, $6,109, and for rent of building, paid into the city treasury, $4,046.

This official document of the city states the expenses in erecting the building to accommodate the artillery regiment lately stationed here at $1,040,070; the expenses of the canalization of the city, a statement as to the purchases made out of the city bonds of 1898, $714,000, and of 1900, $2,380,000.

The city savings bank had in the year 1890 13,802 depositors, with deposits amounting at the close of that year to $2,838,022; at the close of 1900 there were 19,781 depositors, and deposits amounting to $4,546,473. On December 31, 1904, there were 23,826 depositors, with deposits amounting to $6,319,851.

The following statement shows the number of depositors and the average and total deposits of each class for the year 1904:

Number of depositors.	Amount of deposit.	Total deposits.
3,571	$0.238	$11.90
2,028	12.138	23.80
4,149	24.038	59.50
3,524	59.738	119.00
3,513	119.238	238.00
3,348	238.238	476.00
2,570	476.238	1,190.00
1,123	1,190.00	.....

The surplus in the savings bank amounts to $415,624.

WAGES OF WORKMEN.

RATES PAID SKILLED AND UNSKILLED LABOR.

A report from Consul Liefeld states that the statistical bureau of Berlin has lately collected and published facts pertaining to the wages earned by the laboring class in Berlin upon which the following report is based:

The workmen engaged in building operations receive the highest wages, the masons receiving 67½ pfennigs per hour (16.07 cents) and for extra hours 78 to 82½ pfenings, or $0.186 to $0.196. If the work is piecework, the pay is from 48 to 55 marks per week, or from $11.42 to $13.09 or from $1.90 to $2.14 per day.

The plasterers receive 8 marks ($1.90) per day and from 10 to 12 marks ($2.38 to $2.86) if doing piecework, and the carriers a like amount.

The stucco worker receives weekly wages of 42 to 51 marks ($10 to $12.14), i. e., from 83 pfennigs to 1 mark ($0.198 to $0.238) per hour,

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and for extra work or overwork he receives 1.04 to 1.25 marks ($0.248 to $0.305) per hour.

The tiler is not paid as well, receiving 36.45 to 37.80 marks per week, or $8.68 to $9.

The painter receives from 50 pfennigs to 55 pfennigs, or 11.9 cents to 13.09 cents per hour, which is about 29.70 marks ($7.07) per week.

The tile stove setter receives weekly 48 marks ($11.42) if working on time and 60 marks ($14.28) if doing piecework.

The income of the head waiter at restaurants is said to be from 2,520 to 3,120 marks, or $599.76 to $742.56 per year, and for those in the hotels even as much as 4,530 marks ($1,078.14) per year.

The average income of the other waiters is 1,533 marks, or $364.85 per year. The hotel cooks receive annually from 3,120 to 6,720 marks, or from $742.56 to $1,599.36, the average being 4,320 marks, or $1,028.16.

The cloth weavers, working from ten to eleven hours each day, earn from 9 to 12 marks weekly, or only about $2.14 to $2.86, and as they are often out of work they would earn only from 450 to 750 marks, or from $107.10 to $178.50 per year.

The weavers in factories receive from 15 to 21 marks per week, working ten hours per day, or $3.57 to $5, and in the case of piecework, 18 to 24 marks ($4.28 to $5.71) per week.

The weavers at home, working twelve hours each day, can earn only from 6 to 18 marks per week, or from $1.43 to $4.28. The locksmith, mechanic, and saddler earn from 1,000 to 1,250 marks per year—i. e., from $230 to $297.50; the coppersmith, watchmaker, and butcher from 1,250 to 1,500 marks (297.50 to $357), and the brewers, typesetters, and lithographers from 1,509 to 1,750 marks, or $357 to $416.50 per year.

READY-MADE CLOTHING.

LARGE QUANTITIES IMPORTED FROM ENGLAND AND AUSTRIA.

In reply to inquiries made by American clothiers as to the opportunities offered by the German market for the introduction of American ready-made clothing thereinto, Consul-General Guenther, of Frankfort, has prepared the following report for the information of the general trade, as well as for the information of the special correspondents whose inquiries incited its preparation:

In my opinion, American ready-made clothing would find a good market in Germany, provided it would be offered to the public at prices not higher than those charged for similar German-made goods. The present German duty on men's and boys' clothing is 300 marks ($71.40) per 100 kilograms (220.046 pounds). Under the new German tariff law, which will soon go into effect, the duty will be 350 marks ($83.30) per 100 kilograms.

During the calendar year 1904 there were imported into Germany 40.3 metric tons of men's and boys' clothing, of which 12.9 tons came from England and 10.7 tons from Austria. The remainder is not accounted for in the official statistics.

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The exports of ready-made clothing from Germany during the same year were as follows:

	Tons.
Europe:	
Austria-Hungary	157.7
Belgium	8.2
Denmark	42.3
France	8.6
Great Britain	56.3
Netherlands	157.7
Norway	36.1
Sweden	31.4
Switzerland	326.4
Total to Europe	824.7
Africa:	
South Africa	22.0
German East Africa	10.8
Southwest Africa	22.2
German West Africa	16.1
Portuguese East Africa	4.3
Total to Africa	75.4
America: Argentine Republic	31.1
Asia: China	35.8
All other	4.7
Total exports	971.7

The success of efforts for the sale of American-made clothing, should an investigation of the conditions of the markets by an expert show that such sales would be feasible, would still depend upon the systematic manner in which the business would be conducted.

If an American firm is willing to embark in the enterprise of creating a demand for American clothing it should send somebody, familiar with every phase of the business, to Europe to study the market, say, in London, Paris, and Berlin. If, after carefully looking into every detail, he comes to the conclusion that existing conditions would justify the venture, then the firm or firms should do as Mr. Adolf Barthman has done with reference to American-made shoes. This gentleman first started an American shoe store in Berlin, where none but American shoes are sold, following that up with others at Hamburg, Frankfort, and Munich. He will probably start shoe stores in other large German cities.

The imports of American shoes into Germany in consequence have increased from 67.6 tons in 1902 to 118.2 tons in 1904. For the first six months of the present year the imports of American shoes were 67 tons, which figures speak for themselves.

It is possible that in view of the large scale on which ready-made clothing is manufactured in the United States, and taking advantage of the "drawback" of the tariff of 1897, such goods can be offered, in spite of the European duties, at as low a price, quality for quality, as European-made goods. This can, however, only be ascertained by an expert in the business. American manufacturers proposing to engage in the European trade, however, should carefully study every phase of the subject before entering thereupon.

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STEEL TRUST.

OUTPUT AND PROFITS FOR LAST YEAR.

A recent number of the Birmingham Post, forwarded by Consul Halstead, contains the following interesting article on the operations of the German steel trust last year:

The German steel trust has just issued an interesting report relating to its operations during the first year of its existence. Although the trust regulates the production of 8,000,000 tons of crude steel per annum, it only sells for its members at present their output of rails and accessories, joists and other shapes, and partly manufactured steel in the form of ingots, billets, blooms, and sheet bars. These classes represent about 4,600,000 tons per annum, while the remaining 3,400,000 tons, which are composed of bars, rolled rods, plates and sheets, railway axles and tubes, are disposed of directly by the works themselves, pending the conclusion of arrangements for the sale of those products being also undertaken by the trust.

The report deals with a period of thirteen months ended March 31, 1905, and as a consequence the amount of steel handled is greater than if twelve months only were taken into consideration. During the period in question the trust delivered to customers 4,994,334 tons of partly manufactured steel, joists, and other shapes and railway material. As the allotted production of all the works was 4,998,743 tons it will be seen that the actual sales were only 4,409 tons less than the permissive output, but the turnover would have been much greater than shown if the disastrous coal miners' strike at the beginning of 1903 had not seriously interfered with the trade.

ADVANTAGES CLAIMED FOR THE TRUST.

Of the total sales the trust exported 28 per cent, while an average of 72 per cent was disposed of in the home market. As the exports before the trust was formed averaged 40 per cent of the total sales, with 60 per cent worked up in Germany, the trust regards the large increase in the inland consumption as illustrating the advantages derived through the establishment of the trust. The whole of the steel delivered to consumers is not booked in the thirteen months' financial year, and the balance will presumably appear in the accounts for the second year. The report actually brings into account 3,043,050 tons of crude steel, or 2,619,971 tons as calculated in finished steel, and the total sum received for this quantity is given as £12,727,637. After meeting working expenses, which amounted to £63,225, and providing for other charges, the balance represents the payments made to the syndicated works for the above-mentioned tonnage of steel sold on their behalf by the trust.

EARNINGS AND DIVIDENDS.

The report does not throw any further light on the financial results, but those of the companies themselves are interesting as bearing on this point. Thus the dividend of the Bochum Union has advanced from 10 per cent in 1903–4 to 12 per cent in 1904–5; that of the Phœnix Steel Works from 8 to 10 per cent; the Hoerde Mining and Iron

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Works Company from 8 to 10 per cent; the Saxon Cast Steel Works, Dohlen, from 8 to 10 per cent; the Maximilian Iron Works from 17½ to 23¾ per cent; the Kramer Works from 6 to 12 per cent; the Haspe Works from 8 to 9 per cent; Van der Zypen and Wissen from 9 to 10 per cent, and the Georgs-Marien Works from 3 to 3½ per cent.

Those works which have just declared the same rate of dividend for the past two years are the Gutchoffnungs Hutte with 20 per cent in each year; the Hoesch Steel Works, 12 per cent; the Kattowitz Mining and Iron Works Company, 10 per cent; the Rhenish Steel Works, 9 per cent; the Rombach Works, 8 per cent, and the Dortmund Union, 2 per cent. The sole concern which has not maintained for 1904-5 the dividend paid in the previous year is the Ilsede Iron Works and Rolling Mills Company, which is the most prosperous undertaking of its kind in Germany. Yet this company complains because its association with the steel trust has reduced its dividend from 52 per cent in 1903–4 to 50 per cent in the past year. More favorable results are anticipated for the current year, as the business of the steel trust is expected to represent at least £20,000,000 of steel products.

THE COLONIES.

CONTEMPLATED CHANGE IN MANAGEMENT.

Consul-General Guenther transmits, in the following report, the most recent statistical information concerning the colonies of Germany, which show them to be a burden rather than a benediction. He writes:

The German colonies consist of East Africa, Southwest Africa, West Africa (Camerun and Togo), Kiao-chou, New Guinea, Marshall Islands, Carolines, and certain of the Mariana Islands, and of the Samoan Islands of Upolu and Savaii.

A lengthy editorial in a recent issue of the Frankfurter Zeitung treats of the colonial policy, its inception, results, and the contemplated changes in the management of these colonies. The article closes as follows:

"Attention is called to the following items of expenditures, the expenditures for 1904 and 1905 being estimated:

Expended by and for—	1902.	1903.	1904.	1905.
	Marks.[a]	*Marks.*	*Marks.*	*Marks.*
Colonial government	709,000	821,000	864,000	959,000
Current expenses	21,100,000	18,489,000	21,680,000	19,089,000
Extraordinary expenses	.....	.....	3,000,000	3,600,000
Expedition to Southwest Africa	.....	.....	101,508,000	81,340,000
Total	21,809,000	19,310,000	127,052,000	104,988,000

[a] The mark=23.8 cents.

"This makes in four years 272,000,000 marks, in round numbers, of expenditures for the colonies, to which must be added the expenses of the navy department.

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"What are the results of our commerce with the colonies? In 1904 the figures were—

Colonies.	Imports from.	Exports to.
	Marks.	*Marks.*
East Africa	3,423,000	5,075,000
Southwest Africa	134,000	14,811,000
West Africa	6,634,000	6,442,000
Kiao-chou	38,000	7,705,000
New Guinea, etc	107,000	811,000
Samoa	891,000	202,000
Total	11,227,000	35,046,000

"The exports were mainly for the supplies of the troops and the Government, which logically must be excluded from the normal commerce. What remains is extremely little for the efforts of decades, and it can safely be said that each million of commerce costs ten times the amount in expenditures. It is true that the present times are abnormal, but with the colonies the abnormal is really the rule. In the papers friendly to the colonies the little interest shown by the German people with reference to the sufferings and heroic deeds of our colonial soldiers is regretfully pointed out, and a conservative organ sighs for an increased interest on the part of the Emperor for our colonies, so that the people might be led to show more interest in them. But, in view of these facts, how shall a loving interest arise for these distant, poorly developed possessions which promise so little for the future? The people only feel the colonial policy as an increasing burden; they do not perceive any resulting blessing. One family or another knows of a dear grave there, but it is very questionable whether it is thereby made any more eager for the colonial policy. There is cause to thank these persons and parties who gave timely warning against this whole policy. The abandonment of transoceanic possessions would not be without precedent; we only need to remember Delagoa Bay and Witu. The time may perhaps not be far away when the value of the existing colonial possessions will be examined soberly and without prejudice."

INSURANCE.

LEGAL DECISION REGARDING OVERDUE PREMIUMS.

Almost all insurance companies doing business in Germany, writes Consul-General Guenther, of Frankfort, have a clause in their policies which declares that the insurance becomes void if the premium is not paid within a specified time. This has been treated by the German courts as of little or no binding value, particularly where the companies have accepted premium payments after a certain specified time.

The question, Can an insurance company which for a time, more or less long, had accepted payment of premiums after they were due, declare the policy to be void if the insured asks for the payment of the sum insured when the payment of the premium was overdue? has, according to German papers, recently been decided by the German federal court in favor of the insured.

Somebody was insured with a life insurance company for $2,400. The premiums in half-yearly installments were due on March 14 and

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September 14 of each year. These premiums for years had been paid tardily and only after demand. Upon the receipts for premiums it was always shown, in a visible place and in plain print, that the payment of the premium must be made within thirty days after being due, otherwise the policy would be void. The company, however, always accepted later payments without remonstrance. The insured died on April 16, and had not paid the premium due on March 14. The widow of the deceased, as his heir, demanded payment of the insured sum. This was refused on the ground of nonpayment of the last premium. After the lower courts had dismissed the suit of the widow, the "Reichsgericht" decided in her favor on the following grounds:

Inasmuch as the insurance company for years had not refused the premiums, notwithstanding their delayed payments, the insured, in the opinion of the "Reichsgericht," could assume that the noncompliance of the fixed terms of payment would not result in rendering the policy void at once; that to do this it would require a special determination of the insurance company and a notification of this determination to the insured. If the company would insist upon its right according to the conditions, then it should have said, at each deferred payment, that it considered the policy void, but would be willing to contract for a new one.

The insured, therefore, with reference to the printed notice upon the premium receipts, could assume it to be the will of the insurance company that even if payments of premiums were delayed the contract would be in force until the company had declared it void. If an insurance company, after the death of the insured, insists upon the condition which renders the policy void on account of not keeping the time for payment of the premium, such a course, according to the view of the "Reichsgericht," is in violation of good faith and can not have legal effect.

ACCIDENT INSURANCE.

Consul Harris, of Chemnitz, reports a movement in Germany to insure every student attending a technical school from accident.

The German minister of commerce and industry has recommended that every student attending a technical school which belongs to or receives subventions from the State should take out an accident insurance policy. The dangers connected with laboratory experiments, expeditions, etc., are such as to make this step necessary. This is especially intended to protect the younger pupils and apprentices who are attending the numerous trade and industrial schools all over the Empire. The plan is to pay a premium of about 60 cents per pupil annually for $250 in case of death, $4,000 in case of accident which leaves the student an invalid for life, and 75 cents a day for transitory inability to attend school on account of accident. Negotiations have already been commenced with a private accident insurance company in regard to the matter.

MERCHANT MARINE.

RESULTS OF THE EMPIRE'S EFFORTS TO EMANCIPATE ITSELF.

Consul Harris, of Chemnitz, reports upon Germany's merchant marine and points out the marvelous progress made in building up a

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system of ocean transportation equal, as far as it goes, of any ever established. Following is the consul's report:

The German merchant marine to-day consists of 3,471,525 gross and 2,322,045 net tons capacity. This includes all ocean steamers, sailing vessels, and other ships engaged in coast traffic which have more than 17 tons capacity. The total number of ships is 4,156, and they are manned by 59,700 seamen. Since the present Empire was established the Germans have emancipated themselves almost entirely from British shipping interests. The shipyards are exerting every effort. To-day 80 per cent is constructed at home. Twelve years ago the North German Lloyd had 74 per cent of the tonnage of the new vessels added to her fleet each year, built in British shipyards. During the past six years the above-named company has had every vessel built in German docks. The progress made in shipbuilding during the past decade has been of vast importance to the industries of the Empire. To-day every screw, rivet, and nail is produced by German manufacturers, and the requirements of the merchant marine in coal and provisions stimulates and keeps alive many an industry which would otherwise be unable to exist. Imported materials for shipbuilding are on the free list, and the Government railroads transport such materials at much lower rates than ordinary freight. The Empire begrudges no subsidy which will in any way enhance her maritime interests.

TWO NEW TRANS-ATLANTIC VESSELS.

The fastest and most sumptuously equipped ocean steamships in the world are now built in Germany. There will shortly be placed in the trans-Atlantic service two vessels which will surpass in every respect the *Great Eastern*, which was one of the world's marvels, and only failed to meet expectations because technical science in 1859 was not what it is to-day. These vessels have been ordered by the Hamburg-American Line, the one being built by the firm of Harland & Wolff at Belfast, the other by the Vulcan Works at Bredow, near Stettin. The one being built at Belfast has 22,250 gross tons, is 690 feet long, 74 feet wide, and 53 feet deep, with 15,800 horsepower. The one being built near Stettin has 25,000 gross tons, is 700 feet long, 77 feet wide, and 54 feet deep, with 17,200 horsepower. Germany has advanced from maritime weakness to maritime strength. This has not taken place at once. It has been achieved by enlisting in the effort all the resources of science and education, supported by untiring industry and patience. A country which is situated upon what is practically an inland sea, and compelled to import from foreign countries much that is necessary in shipbuilding, deserves great credit for having created such an effective merchant marine. So vast is the influence exerted by the merchant marine upon export trade, and so important has it become to the vital existence of the nation, that the people realize that the creation of a great navy is necessary to protect their commerce against all eventualities. It was to enhance the nation's commercial and military interests that an independent cable was laid to America, and that others are being projected to South Africa and the Far East.

VALUE OF AN EFFICIENT MERCHANT MARINE.

Some idea of the extent to which Germany is dependent upon her merchant marine may be shown by the fact that the fleets of the

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Hamburg-American Line and the North German Lloyd unload weekly in the two great ports of the Empire enormous cargoes of raw materials. In the textile districts of Saxony and Rhenish Prussia thousands of skilled workmen, with their families, depend for their subsistence upon the regular sailing of these steamers. The export shipments of woolen goods, hosiery, cotton and wool gloves, silk goods, dress goods and trimmings, laces, lace curtains, etc., form in themselves a source of much profit, because many of the orders are sent by fast freight. But it is bulk in freight which makes a steamship line a paying enterprise, and Germany imports from abroad large quantities of timber, logs, furniture, cotton, corn, wheat, oil, and tobacco. Nor do these take into consideration valuable cargoes which are transshipped for Russian and Baltic ports. German exports to all countries in chemicals and dyes, beet sugar, hides and skins, porcelain ware, wine and beer, make up very respectable bills of lading.

Thus we get at a glance some idea of what Germany owes to her merchant marine. England is even more dependent upon her merchant fleets, perhaps, than any other nation. A great writer on naval affairs has shown to the world the magnitude of the influence which sea power has exerted upon history. But what a fighting marine has been in crucial times of war, a merchant marine must necessarily be in times of peace. The rude barks of Phœnicia and the galley fleets of Venice and the Hansa towns tell eloquent tales of prosperity and power. Having before us the examples of history, and knowing what the ships of England and Germany mean to those nations, it does seem that in a country like the United States, which has inexhaustible supplies of coal, iron, steel, and hardwood lumber, possessing magnificent harbors, together with a skilled and intelligent class of laborers, some ways and means might be devised to build a powerful and independent merchant marine.

GERMANY COMPARED WITH ENGLAND AND FRANCE.

In connection with Consul Harris's report it is interesting to note a report by Consul-General Guenther on the merchant marine of England, France, and Germany. He quotes a French deputy, M. Pierre Baudin, as follows:

Germany has a larger merchant marine in the Mediterranean than France. This is shown by the statistics of the Suez Canal, through which 3,761 steamers passed in 1903. Of these 2,278 carried the British, 494 the German, and only 261 the French flag. Deducting the mail steamers, there remained 2,990 British, 360 German, and 136 French steamers for commercial purposes. This proportion between the British, German, and French merchant marine is also shown in the statistics of the movement of vessels in the harbors of China. Against 28 million tons of British and 7.8 millions of German, there are only 1,178,000 tons of French commerce. In the total sea commerce of China and Japan, which in 1901 amounted to 48 million tons, the percentage for England was 54, Germany 16, and France 2 per cent. The value of goods carried was 51 per cent for the English, 11.5 per cent for the German, and 5.4 for the French flag.

During 1903, at Calcutta, 968 English vessels entered and left, against 77 German and only 24 French. The figures for Bombay,

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Kurachee, Singapore, Penang, etc., are similar or even worse for France.

In Australia, which is such a splendid market for French products, the conditions of the merchant marine are not much more favorable for France. Mr. Baudin declares this to be due to the fact that France is not doing anything for her merchant marine and has not even considered it worth while to establish a line from northern France, which furnishes the principal articles for Australia, so that all French goods have to go via Antwerp, Hamburg, Bremen, or are shipped on German steamers from Dunkerque and Havre.

WATER POWER IN THE ALPS.

POWERFUL NATURAL AGENCY TO PRODUCE ELECTRICITY.

Consul-General Guenther, of Frankfort, reports that under the caption "White coal in the Bavarian Alps" the Frankfort News publishes an interesting article, from which the following data are taken:

In upper Italy, Switzerland, and France great progress has been made within the last few years in utilizing water power for electric currents, while in this respect Germany has somewhat lagged behind. The cause is, however, easily found. Germany is blessed less with natural water power than the countries named. It must be borne in mind that the number of waterfalls and their quantity of water is of less importance than the height of the falls. A fair illustration is found in Sweden, which, however, has also made great efforts to utilize its water power. In Germany the Danube and the Rhine, with their tributaries, are principally to be taken into account.

An exhaustive article in the Electrotechnical Advertiser deals with the problem regarding progress made in Germany, and especially in Bavaria, in the utilization of natural water power. Since 1899 there has been in Bavaria a State Hydrotechnical Bureau, which has made systematic and thorough measurements of all the river districts. Certain results are, however, restricted only to about one-third of the Kingdom, but they include the rivers coming from the northern slope of the Alps. With reference to the Danube it has been determined that, as far as its course in Bavaria is concerned, its water power, inclusive of all Alpine tributaries, is about 1.9 millions horsepower. Of this only 37 per cent, or 700,000 horsepower, could be converted into useful power. It is estimated that the water power of the entire northern slope of the Alps is about 6 millions horsepower.

Of the 700,000 horsepower available in upper Bavaria, so far only 75,000 has been utilized, or a little over 10 per cent, while in Switzerland and in the Austrian Alps 350,000 horsepower, or 15 per cent, has been obtained from the natural water power. Further development depends upon whether the electric power so obtained from the water forces can be employed profitably. Mountain railroads, which are especially adapted for the employment of "white coal," can only be made profitable where the scenery is very attractive. The electrochemical and the electrometallurgical industries are most interested in such power plants. The factories on the river Lech at the Rhine falls, etc., are illustrations.

The rivers of the Bavarian Alps possess a considerable disadvantage compared with those of Switzerland and upper Austria on account of the lesser height of their falls. The turbine industry has there-

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fore been obliged to resort to peculiar methods in order to utilize the waters of rivers where the fall is limited in a satisfactory manner.

MACHINE TOOLS.

LARGE INCREASE IN DEMAND.

Consul Burrell, of Magdeburg, reports a fairly satisfactory condition of the trade in machine tools. The demand is larger than ever, and the prices satisfactory, though not as high as the demand would seem to warrant. He writes:

The Association of German Machine Tool Factories reports that the factories are in general satisfactorily busy, some, of course, having more to do than others. The demand for machine tools increased considerably in the last few months and was often greater than ever before. The value of machine tools exported increased greatly. In the first half of the present year 36,155,810 pounds were exported, against 29,982,860 pounds during the same months in 1904. In many ways, however, the difficulties of the German export trade have been increased, as those interested in this industry in other countries have been making greater efforts, and the present conditions in Russia impair the business in that country. On the other hand, in consequence of peace between Russia and Japan, a much greater demand is expected, not only in those countries, but in all other markets. The prices of the machines have in general risen, although, on account of the lively competition in Germany, they are kept below that which one might expect from the widespread demand for machine tools. The present situation in any case seems to be such that the factories can insist upon fair prices. The association views with satisfaction the demonstrations made in favor of a possible commercial treaty with the United States, as it is seen that the demands of the German industry for reciprocity are being echoed from all sides.

IMPORTS AND EXPORTS.

A letter from Consul-General Guenther states that the totals of Germany's imports and exports for 1904 amounted to 6,864,300,000 marks ($1,633,703,400) and the exports to 5,315,400,000 marks ($1,265,065,200), divided as follows:

Country.	Imports.		Exports.	
	Marks.	Per-centage.	Marks.	Per-centage.
Great Britain	961,500,000	14.0	995,100,000	18.7
United States	943,800,000	13.8	495,000,000	9.3
Russia	818,700,000	11.9	315,300,000	5.9
Austria-Hungary	731,700,000	10.7	584,400,000	11.0
France	423,600,000	6.2	274,300,000	5.2
Argentina	336,500,000	4.9	102,700,000	1.9
British India	294,900,000	4.3	83,100,000	1.6
Belgium	233,500,000	3.4	277,400,000	5.2
Netherlands	220,900,000	3.2	420,000,000	7.9
Italy	191,400,000	2.8	146,000,000	2.7
Switzerland	180,500,000	2.6	327,900,000	6.2
Brazil	156,700,000	2.3	56,600,000	1.1
Australia, Confederation	143,500,000	2.1	42,600,000	.8
Chile	112,800,000	1.6	44,700,000	.8
Sweden	99,900,000	1.5	151,000,000	2.8
Spain	99,300,000	1.5	56,100,000	1.1
Denmark	95,600,000	1.4	155,300,000	2.9
China	39,600,000	.6	52,900,000	1.0
Japan	21,000,000	.3	57,800,000	1.1

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LIABILITY OF LAWYERS.

Consul-General Guenther says the German lawyers are liable in damages to their clients for evil results consequent upon misleading advice. He writes that the supreme court of Germany has recently rendered a decision that an attorney at law is liable to his client to the full extent for carelessly giving incorrect advice. The court held that the attorney who, for pay, gives his client in legal matters advice as to certain conduct and procedure is liable for the legal consequences suffered by the client in acting thereon, provided that such advice is not only faulty, but has been proven to have been given carelessly. Through the expressly stated or tacit offer of remuneration for information and advice concerning a question, an attorney tacitly assumes the position of debtor of the client, which obliges him to be careful in giving advice, and he is therefore liable for its consequences if he has failed through carel ssness.

ACCORDING TO statistics supplied by Consul-General Guenther, of Frankfort, the tonnage entrances and clearances at Hamburg from and to La Plata, Chile, Africa, and the East Indies were as follows in 1904, as compared with 1903: La Plata, 722,000 tons, an increase of 36 per cent; Chile, 567,000 tons, an increase of nearly 23 per cent; Africa, on the Atlantic coast, 570,000 tons, an increase of over 25 per cent; East Indies, 695,000 tons, an increase of nearly 19 per cent.

CONSUL-GENERAL GUENTHER, of Frankfort, Germany, reports that the transportation of benzine by rail in Germany is subject to certain restrictions on account of its inflammability. The owner of an automobile recently shipped his machine by rail from Munich, where he had taken part in the "Herkommer" races, to his home in Augsburg, but concealed the fact that the reservoir contained about 200 pounds of benzine. For thus violating the railroad police regulations he was fined 10,000 marks ($2,380).

CONSUL KEHL, of Stettin, Germany, reports a plan to establish a branch yard of the "Stettiner Machine Building Company Vulcan" at Hamburg. The plans have been accepted at a general meeting of the stockholders. He adds that it was the direct wish of the Emperor to have a branch yard of the "Vulcan" at Hamburg.

WHAT MAY BE properly called the meat question in Germany has assumed an acute form. Popular uprisings are reported in various sections of the Empire, and the sufferings of the people touching the scarcity of meat supplies have become so general that it is very likely the Government will be forced to rescind some of the more stringent regulations adopted upon the demand of the agrarian interests against the importation of foreign meats. Recent press dispatches from Berlin indicate a meat famine in Germany, and it is reported that even horse flesh has risen in price and that dog flesh is no longer obtainable. In consequence, rabbit stalls have been opened in the markets, and the municipalities are buying fish in large quantities to relieve the distress,

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FRANCE.

TO IMPROVE TRADE.

PROPOSED LEGISLATION TO IMPROVE THE MERCHANT MARINE.

Consul Alex. M. Thackara, formerly of Havre, reports efforts of the French maritime world to improve the Republic's merchant marine. Proposed legislation, including fairly large subsidies, is presented in such a suggestive way as to enable one to see just what is wanted and what its effects are likely to be if it becomes law.

The results of the application of the law of April 7, 1902, enacted for the purpose of ameliorating the condition of the French shipping industries, have been so unfavorable that from the time it was enforced strong opposition against the measure has been manifested by the owners and builders of French vessels. They claim that if they do not receive immediate relief they will be ruined—that the shipyards will close and the merchant navy surely decline. Mr. Baudin, in a report made in the name of the budget committee of the Chamber of Deputies, which will be referred to later on, says: "One can readily foresee the lamentable state to which the French merchant fleet of steamers engaged in the competitive freight trade would be reduced if the period covered by the law of 1902 should pass by without any modification of the present régime. In the month of April, 1914, this fleet would be composed of a few steamers still in a seaworthy condition, constructed under the provisions of the law of 1893, and of steamers built between 1902 and 1904, inclusive. Of the first category, there would be, in round numbers, 103,000 tons gross register, and of the second 270,000 tons, making a total of 373,000 tons, with an average age of over 12 years, without a single vessel less than 10 years old."

REPORT OF A PARLIAMENTARY COMMITTEE.

To study the best methods of alleviating the situation resulting from the workings of the law of 1902, an extra parliamentary committee was appointed by the minister of commerce November 5 last. The committee made an exhaustive report, and recommended a measure which, if carried into effect, would, in its opinion, give the necessary support to the merchant navy. The project, with a few minor changes, was approved by the Government and submitted to Parliament in the form of a bill. The most important changes in the present régime which have been recommended by this committee are as follows:

The law of 1902, while adhering to the system of construction bounties provided for in the act of 1893, restored the shipping bounty (compensation d'armement) to steel and iron steamers of foreign construction of over 100 tons register owned by French citizens and sailing under the French flag, which was suppressed by the earlier act. The shipping bounty under the present law, which is given to steamers only, is fixed per day that the vessels are in commission, not exceeding three hundred days in one year, and per gross registered ton, for each ton up to 2,000 tons, at 5 centimes (0.965 cent); for each ton above 2,000 tons up to 3,000 tons, 4 centimes (0.772 cent); for each ton above 3,000

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tons up to 4,000, 3 centimes (0.579 cent); and for each ton above 4,000 tons, 2 centimes (0.386 cent). Vessels engaged in the international coasting trade receive only two-thirds of the bounty.

RATES OF BOUNTY.

In the new project the shipping bounty is extended to all foreign or French built seagoing vessels, both sail and steam, intended for the deep-sea or international coasting trade, sailing under the French flag, which are registered after the promulgation of the new act, with the reserve that foreign-built vessels must be less than 2 years old at the time of their registration. The bounty, which is not limited to three hundred days, as in the present law, is paid per gross ton and per day the vessel is in commission. It is as follows:

Steamers, 4 centimes (0.772 cent) per each ton up to 3,000 tons; 3 centimes (0.579 cent) per each ton from 3,001 to 6,000 tons; 2 centimes (0.386 cent) per each ton from 6,001 tons. Sailing vessels, 3 centimes (0.579 cent) per each ton up to 500 tons; 2 centimes (0.386 cent) per each ton from 501 tons to 1,000 tons; 1 centime (0.193 cent) per each ton from 1,001 tons.

The navigation bounty is suppressed by the new measure.

Under the present law the construction bounties paid to steamers or sailing vessels built in French shipyards are: Steel and iron vessels, 65 francs ($12.545) per gross ton; wood vessels of 150 tons or more, 40 francs ($7.72) per gross ton; wood vessels less than 150 tons, 30 francs ($5.79) per gross ton; machinery, 15 francs ($2.895) per 100 kilograms (220.46 pounds).

PROPOSED CONSTRUCTION BOUNTIES ON STEEL AND IRON VESSELS.

Steamers, 145 francs ($27.985) per gross ton; sailing vessels, 95 francs ($18.335) per gross ton, with an annual decrease of 3 francs 75 centimes (58.04 cents) for steamers, and of 2 francs 50 centimes (48.25 cents) for sailing vessels during the first twelve years of the application of the law. The bounties will remain, respectively, fixed at 100 francs ($19.30), and 65 francs ($12.545) after the expiration of the twelfth year.

ON WOODEN VESSELS.

Vessels of 150 tons or over, 40 francs ($7.72) per gross ton; vessels of less than 150 tons, 30 francs ($5.79) per gross ton. Vessels considered as wood vessels are those entirely sheathed in wood.

If, when a vessel is altered, its tonnage is increased, a bounty based upon the above rates will be paid on the increased tonnage.

The bounties will be paid:

(1) For a new vessel from the date of its registration, or from the date it commences to load cargo, if the vessel is not intended for the French merchant navy.

(2) For an altered vessel from the date it goes into commission after the alterations have been completed.

ON MACHINERY.

For new engines and auxiliary apparatus, such as steam pumps, winches, dynamos, cranes, mechanical ventilators, whether for steamers

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or sailing vessels, for new boilers and their connecting pipes, 27 francs 50 centimes ($5.31) per 100 kilograms (220.46 pounds).

This bounty is decreased annually 62½ centimes (12 cents) during the first twelve years of the application of the law. It will remain fixed at 20 francs ($3.86) after the expiration of the twelfth year.

When a vessel is altered or repaired, for the new parts of the engines, or new engines, boilers, and auxiliary apparatus which may be put in a vessel during its lifetime, the bounty is 20 francs ($3.86) per 100 kilograms (220.46 pounds).

Seven-tenths of the bounties will be paid when the vessel has loaded its first cargo, when it is not intended for the French merchant navy.

The balance of the bounty is paid only to vessels flying the French flag, and under the following conditions:

Two-tenths in one year after the vessel is registered; one-tenth at the expiration of the second year.

The bounty is paid, however, to sailing vessels as soon as they are registered, or when they load their first cargo.

When the tonnage of a vessel is increased after alteration, or when a vessel is repaired, the bounty is payable as soon as the vessel is again in commission, or when the machinery or parts of same have been placed in position.

LIMITATIONS OF EXISTING LAW.

The present law limits the tonnage of steamers which can partake of the benefits of its provisions to 500,000 gross tons of steamers, of which not more than 200,000 tons can be of foreign construction, and to 100,000 tons maximum of sailing vessels. For the payment of the navigation and shipping bounties, the law provides for a total credit of 150,000,000 francs ($28,950,000), of which 15,000,000 francs ($2,895,000) were for sailing vessels, and 50,000,000 francs ($9,650,000) for construction bounties for the 400,000 tons of French-built vessels, 200,000 tons of steamers, and 100,000 tons of sailing vessels.

It is especially to this part of the present law that the French shipowners and builders strenuously object. In less than a year after the law went into operation the quota of tonnage for which the amount of money appropriated was sufficient to pay the bounties was filled.

The result of the limitation of the appropriation to 150,000,000 francs is clearly set forth by Mr. Millerand in a report made in the name of the extra parliamentary commission. He shows that the law of 1902, in article 7, provides for a tonnage of 600,000 tons; 100,000 tons of sailing vessels, 300,000 tons of steamers of French construc tion, and 200,000 tons of foreign-built steamers.

AGGREGATE OF BOUNTIES.

The bounties for twelve years, the life of the law, calculated according to the provisions of articles 2 and 3 of the act, would amount, on an average, per ton, as follows: To 341 francs ($65.81) for sailing vessels; 137 francs ($26.44) for foreign-built steamers (shipping bounty); 592 francs ($114.25) for French-built steamers (navigation bounty).

The amount necessary for the payment of the bounties would be, 100,000 tons sailing, $6,581,300; 300,000 tons French built, $34,276,800; 200,000 tons foreign built, $46,069,100; total, $86,927,200.

The appropriation for the payment of the navigation and shipping

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bounties, instead of being 238,000,000 francs, was limited to 150,000,000, divided among the vessels in the order in which they were registered in the list of vessels entitled to bounty as required by the law. In other words, the amount appropriated by the act of 1902 is sufficient to pay the bounty to only a fraction of the vessels which should be entitled thereto. Instead of the 600,000 tons of new vessels, which it was expected would be added to the French merchant fleet, the tonnage actually registered, and which can be paid the bounties, amounts to 273,221 tons.

The discrepancy between the amount required to pay the bounties and that appropriated by the law resulted in the shipowners giving rush orders to the builders, in order to have their new vessels enrolled among those which would enjoy the benefits of the law. In less than one year the quota was filled, and if the law is not changed owners of vessels which are not included in the 280,000 tons, in round numbers, will receive no support from the Government in the way of bounties for the next ten years.

BOUNTY FOR CONSTRUCTION.

In the proposed measures the construction bounties for new vessels which will be entitled to receive the shipping bounty can not be applied to more than 50,000 gross tons steamers and 15,000 gross tons of sailing vessels in one year until after the expiration of the law of 1902, but the new act does not limit the appropriation necessary to pay the bounties. The construction and shipping bounties recommended by the committee are not subject to the retention for the benefit of the seamen's beneficial institutions, as required by the present law. Each year an amount equal to the 6 per cent of the construction bounties and 11 per cent of the shipping bounties specified in articles 4 and 21 of the law of 1902 will be provided for in the budget of the minister of marine and paid to the beneficial societies mentioned in the above-named articles. Under the present law the navigation bounty is reduced 5 per cent when steamers on their trial trips, half loaded, make less than 12 knots per hour, 10 per cent when they make less than 11 knots, and no bounty is paid to those which do not make 10 knots.

SPEED REQUIREMENTS.

The new project provides for a reduction of the 15 per cent of the shipping bounty when vessels on their trial trips, half loaded, make less than 10 knots per hour, but equal to or more than 9 knots. No bounty is given to vessels which make less than 9 knots. The bounty, however, is increased 10 per cent when the vessels make at least 13 knots on their trial trips, 20 per cent when they make at least 14 knots, and 30 per cent when they make at least 15 knots. Vessels intended for a subsidized postal service will have the right only to the construction bounty of 65 francs per ton register and of 15 francs per 100 kilograms (220.46 pounds) of machinery provided for by the law of January 30, 1893.

SUBSIDIZED SERVICE.

If a steamship company employs one of its steamers in a subsidized service on which vessel bounties provided for in articles 1 and 2 of

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the present law have been paid, during the whole period the vessel is employed in such service, an amount will be retained from the bounties equal to two-thirds of the subsidy received for the services of the vessel, which will be paid into the public treasury as a reimbursement of the difference between the construction bounty paid and those which would have been paid under the provisions of the law of 1893. The total amount may not exceed the amount of the difference.

The benefit of the bounties created by the new project is reserved—(1) as to construction bounties, to vessels of which the hull, engines, and boilers have been constructed in France; (2) as to shipping bounties, to vessels whose home ports are located in France.

The above are the salient points of the measures which will probably be discussed during the approaching session of the Parliament. If it should become a law in its present form, the French shipowners will be able to purchase their vessels in the most favorable market and still receive the shipping bounty to compensate them for the charges imposed by the inscription maritime. The increased construction bounties, it is thought, will enable the French builders to compete favorably with foreign constructors, and thus be in a position not only to supply the wants of the French, but also to obtain a share of the foreign trade. The tonnage of new vessels constructed, however, is limited to 50,000 tons per annum.

STANDARDIZING OF PRODUCTS.

METHODS BY WHICH FOREIGN MARKETS MAY BE WON.

Consul Skinner, of Marseille, thinks there are good opportunities to increase America's foreign trade. He finds fault with some of the prevailing methods and points out such as would seem to him to lead to success, or at least to be worthy of trial. He favors the national standardization of products sold from samples, such as cereals, cottons, oils, greases, etc. He writes, replying to questions submitted to him:

Our chambers of commerce and boards of trade are private corporations, membership in which has a certain commercial value and may be sold and transferred. They are undemocratic in principle and frequently unrepresentative in practice. The French bourse is a public institution to which the business taxpayer has access of right under reasonable administrative rules. The business community elects a chamber of commerce and a tribunal of commerce. When the French chamber of commerce speaks it does so, not with the voice of certain estimable gentlemen who have the means to purchase their membership, but with that of the whole business community. Our commercial interests require and are entitled to similar institutions.

ADVOCATES STANDARDIZATION.

Many of our natural and manufactured products, notably the cereals, cottons, oils, and greases, are susceptible of national standardization, and this should be accomplished by authority of law, if we care to protect and perpetuate our extremely advantageous method of selling these articles abroad on the basis of inspection certificates. We undertake even now to impose these certificates upon the foreign

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buyer, who accepts them because they are issued under the authority of a board of trade somewhere, which he supposes to be a public institution like his bourse and chamber of commerce. He pays for the shipment, having never seen a sample before the cargo arrives. To the credit of the American business man, the delivery usually conforms to the declarations upon the board of trade certificate. But I have also heard of complaints. The European buyer of No. 2 red winter wheat from the town of X, in America, has secured, perhaps, a sample of No. 2 red winter wheat in Z, which is much better than his purchase. Perhaps also he goes to law, and when he has liquidated the transaction he discovers that the inspectors of wheat in X and Z have two different and entirely honest opinions as to what that merchandise really is, and that he really got No. 2 red winter from the X point of view; that if it had been green cheese instead of wheat he would have been obliged to pay the agreed price, as the seller did not undertake to guarantee the quality of the wheat, but to ship a merchandise which should be declared to be No. 2 red winter wheat by the X board of trade inspector, who, in the final analysis, was not responsible except to his conscience.

EVILS OF EXISTING SYSTEM.

A few years ago a French importer bought a certain American grease, which upon custom-house analysis proved to be a compound subject to a higher rate of duty. The importer complained to his seller and the latter declined to make good the loss, because the inspection certificate declared the merchandise to be that which had been bought. The buyer was willing to leave the dispute to the arbitration of the American board, whose licensed inspector had issued the certificate. The award went against the importer, because he had contracted to buy on the basis of the certificate irrespective of material facts. Thereupon the importer asked what should be the nature of the article covered by the certificate of the board's official inspector and he received the astounding reply that the board, whose inspectors were passing daily upon this important article of merchandise, had never yet classified it as to component parts, but would do so in the near future.

I maintain that we can have a system of public boards of trade, controlled inspection certificates based upon definite and unvarying standards, and that such a reorganization of the business system would be of great value to our material interests.

Standard samples of American merchandise susceptible of standardization should be deposited in the important American consulates, open to the inspection of foreign buyers.

WHAT IS BEING DONE.

The Department of State is doing its utmost to increase the efficiency of the consular service, which is almost a self-supporting branch of the Government, but owing to the inadequacy of the appropriations consular officers frequently find themselves facing necessary work with their hands securely tied. Even as matters stand, the service is performing a wider variety of duties than any other in the world. It is safe to say that the good people who hope for a consular reform which would give us what certain Old World nations now possess are very

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unfamiliar with the foreign conception of the consular function. The American service is capable of performing tasks of immense value to the American exporter, and the systematization of its work and the widening of its scope may safely be intrusted to the Department of State.

WHAT AMERICA'S RIVALS ARE DOING.

Americans willingly travel for pleasure, but they are seldom inclined to live abroad permanently for the purpose of engaging in business. In Great Britain and Germany, our chief competitors, there is a surplus of men, who naturally seek trading centers abroad, where they act as intermediaries for the sale of British or German goods. The important foreign firms are always harboring one or more "volunteers," young Englishmen or Germans, who leave home to prepare themselves for this work. We have comparatively little material of this sort to draw upon, and therefore such foreign business as has not actually sought our manufacturers has usually been obtained by working through existing foreign commission firms, the American exporter remaining a stranger in both cases to the requirements and possibilities of the consuming market. Now, there is a surprisingly small number of American manufacturers actually possessing an export trade, but as it is fairly representative the European concerns handling the business see little or no advantage in extending their lines, to the confusion of their own buyers, who would be in doubt when confronted by similar articles from different manufacturers. The result is that we go round in a very narrow circle.

HOW TO SECURE TRADE.

It follows that a large number of American manufacturing firms find themselves practically excluded from foreign markets, unless they have the energy and capital to undertake to represent themselves. The natural remedy it seems to me would be to organize selling companies, the stock to be apportioned among manufacturers of allied but not competing lines, these selling firms to establish selling agencies abroad on a practically cooperative basis. We can not sell American goods abroad without agencies through which to sell them.

Another class of American manufacturers have exclusive contracts with large selling firms in New York, who handle their entire output and get such foreign trade as brokers bring to them. This method answers very well with a demand greater than the supply, but it certainly prevents trade expansion when the opposite is true. I should think that syndicates of manufacturers who have thus divested themselves of control of their own sales might profitably consider whether they should not require their central sales agency to adopt the policy of going abroad to build up and hold business.

THE GREATEST NEED OF THE INDIVIDUAL.

We come now to "the greatest need of the individual American manufacturer in his foreign trade." Probably his first need is to convince himself that he really wishes to engage in foreign trade. The American manufacturer will go to his annual convention and vote for resolutions about foreign trade; he may have some vague notion that

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the Government ought to bring foreign trade to his very door; he will write to consular officers for addresses, and he will go abroad to obtain rest, but only in exceptional cases will he take the time to seek knowledge about his own private business in the foreign markets in which he might sell his wares. Now, all the generalizations and dogmatic assertions of all the pretended experts in the world are worth less to him than knowledge at first hands, which he can obtain for himself in a few weeks at trifling expense. The great signal successes of American manufacturers in the Old World have been made by firms who have simply extended their domestic operations abroad, applying American methods in their own way. There is very little that is mysterious about this foreign trade, yet American firms which will set up branches without hesitation 3,000 miles from their bases in the United States see something exceptionally difficult about doing the same thing abroad.

To-day the greatest obstacle to a more rapid increase in our foreign business is the indifference of the vast majority of American manufacturers, and a lack of persistence, or what the French call esprit de suite, among many others. The Government is doing all it can with the facilities at its disposal to increase our trade and to find new markets, manufacturers through their trade organizations are doing a good deal, and we have a trade journalism without an equal in the world, but these several instrumentalities, if they were absolutely perfect, could not increase our export business without a greatly stimulated practical interest in the subject on the part of individual firms, followed by practical efforts to do something for their own account.

AMERICAN CHAMBER OF COMMERCE.

EFFICIENT WORK TO FACILITATE AND PROTECT TRADE.

Consul Haynes, of Rouen, reports about the work of the Paris American Chamber of Commerce. He says it has been of great service to trade and has helped to settle controversies, etc. The report follows:

Through the kind assistance of its honorary secretary, Mr. Blythe W. Branch, I am enabled to call attention to the inestimable good the American Chamber of Commerce in Paris is doing for the advancement of French-American trade. This body, when founded fifteen years ago, stated in its rules and regulations that its objects were "to examine questions concerning the commercial and industrial relations between the United States of America and France; to protect mercantile interests subsisting between individuals and firms in the two aforesaid countries, and to take all measures which may facilitate and protect the transaction of business between them." Also, "to collect information touching the above interests for the benefit of its members, so as to facilitate their business operations. Political discussions shall be excluded."

It would be impossible in this short article to mention all the commercial and industrial questions and those contingent and relative to them between the United States and France which the chamber has thrown light upon and adjusted since its foundation; nor could all the mercantile interests subsisting between individuals and firms which have been settled be named. Suffice it to say that within a compara-

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tively short time some of the most important matters in connection even with the decisions of the Department of State and of the Treasury have been better understood, leading to the facilitation, protection, and increase of French-American trade. One instance among scores is the work accomplished last year in regard to the importation of American talking machines into France. The attention of the chamber was called to a bill then pending before the French Parliament which, among other provisions, imposed an increased, prohibitory duty on talking machines. Immediately it took steps to prevent this discrimination against an essentially American industry. The action taken was completely successful, and the bill as finally adopted was free from the objectionable provisions.

EFFECTIVE WORK.

Another interesting question mentioned in the Chamber's Year Book was regarding the practice of the United States customs in establishing the market value of perfumery in France for the purpose of computing ad valorem duties. The practice of the customs has been and is to include in the market value the droit de circulation sur l'alcool, on the plea that the nonpayment of this tax on exported goods constitutes a disguised form of rebate. Certain facts were laid before the United States Treasury Department which had the effect of eliciting a very complete statement of the information on which the Department's ruling is based. This matter is now under investigation by the committee on legal and governmental relations, and it is believed that such evidence will be collected as may lead the authorities to a reversal of of the present ruling.

Minister Rouvier's proposed income bill appears, as at present drafted, to be fraught with great hardship to foreigners residing in France, and it is thought that the far-reaching effects of certain of its provisions have been overlooked. This question is also under investigation by the chamber's committee on legal and governmental relations, and in due time such representations will be made in the proper quarters as circumstances may warrant.

RELATIONS WITH THE EMBASSY.

In a word it may be said that the chamber forgets no question affecting trade relations between the two countries. Its relations with the American embassy at Paris, with the consulate-general there, the various departments of the United States and French Governments have been close and cordial. It is upon the most friendly terms with other commercial bodies, and is often called upon for advice and assistance by chambers of commerce, chambres syndicales, and boards of trade.

In addition to such assistance the chamber issues regularly a bulletin of which each number contains some article interesting to commerce. A recent communication from this office on the "Packing of machinery for export" contained in full one of these articles, which gives a general idea of their character. Some deal with legal matters interesting to Americans in France, others with copyright laws, etc.

These papers are the most valuable feature of the official publication, and have brought much credit to the chamber as well as to the

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individual contributors. The bulletin also contains statistics of the imports and exports of the United States to and from France during the months of the year immediately preceeding its issue, and also other interesting matter among which is an index to all the consular reports made by American consuls in France. All bulletins are given a very wide distribution in the United States, and those desiring copies can secure them by addressing the secretary American Chamber of Commerce, 3 rue Scribe, Paris. The various bulletins issued last year contained over 150 pages. Besides this publication there is also issued a yearbook which contains most interesting information concerning the work of the chamber, its progress, aims, etc.

The total number of active members at the beginning of this year was 258, comprising merchants, manufacturers, bankers, and professional men. Of these 258 members 171 are Americans and 87 foreigners, and 208 are resident and 50 nonresident. The membership consists of persons not residing nor having a place of business in France. All American citizens and firms in good standing interested in the objects for which the chamber is constituted are eligible.

WEALTH OF THE REPUBLIC.

REMARKABLE DISTRIBUTION—FRENCH RESOURCES.

Writing about French wealth, Consul-General Skinner, of Marseille, points out the habits of economy and thrift that have led the French people to earn and to save. The story told by the figures submitted is an eloquent one. It suggests conditions of comfort that are commendable and a distribution of wealth that is rational. The consul says:

The habits of economy and the wide distribution of wealth among the French people are conclusively revealed in the official return of estates taxed during the year 1904. In 17 departments out of 86 estates none worth as much as 500,000 francs ($96,500) has been administered upon. Outside of Paris there were no estates worth over 50,000,000 francs ($9,650,000), and only 3 in Paris. On the other hand, in every department except Corsica and 5 mountainous departments there were from 100 to 3,024 estates worth from 8,000 to 50,000 francs ($1,930 to $9,650). The tables annexed speak for themselves.

The estates taxed in 1904 were divided in thirteen classes, as follows:

Class.	Number.	Net taxed value.
From 19.3 cents to $96.50	119,539	$5,866,937
$96.50 to $386	102,785	24,924,822
$386 to $1,930	103,157	95,904,205
$1,930 to $9,650	42,042	171,381,374
$9,650 to $19,300	6,876	94,211,304
$19,300 to $48,250	4,449	134,886,144
$48,250 to $96,500	1,548	106,883,739
$96,500 to $193,000	724	95,051,520
$193,000 to $386,000	311	86,840,129
$386,000 to $965,000	123	67,714,711
$965,000 to $1,930,000	33	44,435,127
$1,930,000 to $9,650,000	11	41,406,209
Above $9,650,000	3	48,338,389
Negative estates	13,186	.....
Total	394,787	1,017,844,635

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AMERICAN TOBACCOS.

Consul-General Gowdy, writing from Paris September 16, directs attention to tobacco contracts made in the United States in behalf of the French Government. Inasmuch as tobacco is a State monoply in France, the raw material used in the manufacture of the various products made from tobacco is bought in the United States by French consuls, or under certain kinds of contracts. The report follows:

The contract this year for Virginia tobacco was for 500,000 kilograms (about 500 tons) in a single lot. A deposit of 20,000 francs ($3,860) must be made by each bidder. The tobacco had to be of certain types and delivered at Havre, Bordeaux, and Marseille in three consignments, the first before October 10, 1905, the second between that date and January 10, 1906, and the third before April 1, 1906, under penalty of paying 20 per cent of the value of the quantity missing.

Similar conditions were imposed with regard to Maryland tobacco, with the difference that the quantity required was 3,300,000 kilograms (3,300 tons), and that there were three contracts of 1,100 tons each. Conditions as to the quality and delivery were the same, except that it was stipulated that Ohio tobacco (even the clean scented) should be excluded, and the deposit required was of course in consequence.

The conditions regarding Kentucky tobacco were the same as for Virginia, the quantity required being 500 tons.

American tobaccos—Kentucky (burley and dark), Ohio, Maryland, and Virginia—are usually bought on the spot through the French consuls or by contract.

AGRICULTURAL SCHOOLS.

Consul-General Skinner, of Marseille, sends a long list of the agricultural schools of France. There are 86, some public, some private. They give instruction in agriculture, paying particular attention to scientific methods, to intensive farming, to the care of cattle, the planting of trees, vines, etc. Many of them devote a great deal of time and attention to the dissemination of knowledge among rural populations that are not able to attend schools. They are divided into national and superior schools, of which there are 11; schools that give free instruction in agriculture, of which there are 5; agricultural schools and stations, 16; schools of practical agriculture, 12; agronomic schools and stations, 26; miscellaneous special schools, 16; miscellaneous, 16.

Consul Atwell, of Roubaix, reports a new typewriter for the blind which is an improvement on the Braille alphabet system. It was invented by a Mr. Vaughn. Two alphabets instead of one are used.

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SPAIN.

COMMERCIAL SYNDICATES.

CONTROL OF THE PALM-LEAF HAT AND ALMOND MARKETS.

Consul Birch, of Malaga, reports that syndicates or "trusts" have been formed for the purpose of controlling the palm-leaf hat and almond market of his consular district. Concerning their success he writes:

Two of the four principal articles exported from Malaga are practically in the hands of a "trust." The palm-leaf hat business was absorbed by a combination of merchants about one year ago. These hats are made exclusively for the American market, to which about 4,000,000 are sent every year. Quickly following the organization of the palm-leaf hat "trust," another was formed for the purpose of controlling the almond market. In both instances the "trusts" affects only the purchase of almonds and hats from the producing districts and do not intervene with respect to the ultimate sales to American buyers. Each local exporting house retains its identity and the business of each is conducted along lines followed in the past. The reduction of first-cost prices is the avowed purpose of each syndicate.

The progress of the almond "trust" is being closely watched, as the season is under way. This particular "trust" is incorporated under the title of "Campania Almendrera," its existence is fixed at five years, and the capital stock is listed at $140,000. Its business has not met with serious opposition, as most of the purchases of almonds have been stored in its warehouses.

Prices fixed for almonds, in 25-pound lots, by the "trust" during the month of August and still maintained are much lower than those that prevailed last season, as the following table shows:

Grade.	1904.		1905.	
	Best.	Small.	Best.	Small.
Jordans	$6.60	$6.50	$3.40	(a)
Valencias	4.25	5.75	3.00	$2.85

a Not quoted.

American buyers have been much benefited by the formation of these syndicates, whereas the Spanish grower has been "squeezed." Sales thus far made of the grades of almonds most in demand by American confectioners show a decrease of from 75 cents to $1 a box as compared with the prices of last year. In 1904 the Jordan grade, in 25-pound boxes, sold for $6.80 to $7.15; in 1905 the same kind sold for $6.05 to $6.10. The Valencias in 1904 brought $5.25, and in 1905 the price was $4.50 for boxes containing 28 pounds.

Palm-leaf hats of the large sizes are also cheaper than prior to the formation of the "trust." Shipments recently made as compared with those in June, 1904, show sales of the grade known as "extra large" at 11 cents less a dozen, while the "large" lots have decreased

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in price about 6 cents a dozen. As these hats are sent to New York by the thousands of dozens at a single shipment, the difference in price may be comprehended. The New York demand for these hats is always greater than the Malaga market can supply.

TRADE OF THE KINGDOM.

SUBSTANTIAL PROGRESS NOTABLE IN MANY LINES.

In the following report Consul Price, of Jeres de la Frontera, reports progress in Spain's industrial life. The increase is not very large, measured by the progress of some other countries. Still it is gratifying—it is progress.

The imports into Spain during the first five months of 1905 amounted to 393,373,409 pesetas and the exports to 331,769,716 pesetas; the imports of gold and silver to 5,373,409 pesetas, the exports of the same to 6,769,716 pesetas. The principal increase in imports over last year was, in raw materials and food products, over 47,000,000 pesetas.

In the first five months of 1904 the exports of food products amounted to 145,000,000 pesetas, and in 1905 the exports were 115,000,000 pesetas. The increase in 1905 of exports of manufactured articles was 1,500,000 pesetas. During the first five months of 1903 the imports amounted to 12,000,000 pesetas more than the exports. In 1904 the exports were 4,000,000 pesetas more than the imports, and in 1905 the imports were 63,000,000 pesetas in excess of the exports. The increase in imports this year is principally due to the imports of food products.

The imports of wheat increased from 68,000,000 pesetas in 1904 to 261,000,000 pesetas in 1905, and that of flour from 400,000 kilos to 10,000,000 kilos. In 1904 the exports of olive oil were valued at 28,000,000 pesetas, and in 1905 21,000,000 pesetas. The exports of oranges decreased 50 per cent in 1905. The export of common wines in 1904 was 1,300,000 hectoliters, and in 1905 only 778,000 hectoliters. There were exported in the last year 146,000,000 pesetas of Spanish fruit and vegetables, as follows:

Articles.	Quantity.	Value.
	Kilos.	*Pesetas.*
Onions	106,000,000	9,000,000
Almonds in shell	4,000,000	3,125,000
Almonds, shelled	9,000,000	21,000,000
Peanuts, American	5,000,000	2,000,000
Peanuts, European	9,000,000	7,000,000
Chestnuts	2,000,000	350,000
Figs, dried	3,500,000	838,000
Walnuts	307,000	151,000
Raisins	26,500,000	18,500,000
Other dried fruit	428,000	171,000
Pomegranates	4,000,000	708,000
Lemons	4,000,000	1,125,000
Oranges	409,000,000	61,000,000
Grapes	47,000,000	16,125,000
Other fresh fruit	22,000,000	3,125,000

Kilo=2.2046 pounds. Hectoliter, liquid=26.417 gallons. Peseta=$0.193.

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ITALY.

THE MILAN EXPOSITION.

IMPORTANCE OF AMERICAN REPRESENTATION.

Consul Dunning urges American merchants and manufacturers to be represented at Milan in the exposition of 1906. He thinks there is no better way of showing Italy and the rest of the world just what kind of goods are produced in the United States. The report follows:

It is my opinion that American manufacturers have considerably underestimated the relative importance of the Milan exposition of 1906, which will continue from April to November in celebration of the opening of the Simplon Tunnel, and which will be a world's fair. Since the constantly increasing correspondence of this consulate seems to indicate a growing desire on the part of American exporters to sell their goods in Italy, I believe the Milan exposition affords an unusual opportunity for wide-awake firms whose products naturally meet with the sharpest kind of European competition. If present tariff movements in more than one country in Europe may be taken to mean anything definite and significant toward American trade, it seems that our manufacturers will require a better representation of their goods on the Continent in future than ever before.

The exposition is to be on the grand scale with which visitors to Chicago, Buffalo, and St. Louis are familiar. Every branch of art, science, agriculture, and the industries will be given ample space and adequate opportunities for exhibition. The entire fair will cover more than 1,000,000 square meters (10,764,200 square feet), of which one-quarter will be covered by buildings which are already rapidly approaching completion, and which will be a decided credit to the Italian architects and to the management of the fair. The buildings will be covered in with wood and decorated with the "staff" adopted for the Chicago and other fairs. Japan, Germany, France, Mexico, Belgium, Switzerland, Austria, Great Britain, and Italy will be officially represented at the fair; and nearly every other country in the world, including China, and the most active of the South American nations, will be largely represented as to their trades and evidences of their progress in every line of endeavor. Aerial and submarine navigation, wireless telegraphy, social science hygiene in cities, the latest mechanical appliances of all sorts, systems of bookkeeping and accounting, methods not only for saving and preserving life, but for insuring it against both accident and death—all these will have a place in the fair, and there will be liberal prizes in a series of competitions intended to be second to nothing ever held at any world's fair previous to this. These competitions will extend to literature and music. During the fair there will be special sports, races, an extraordinary season of the Scala theater, and more than a hundred national and international congresses, ranging in character from liberal religion and advanced surgery to the latest designs for electrical locomotives. In short, the Milan fair is to be a world exposition in every sense of the term.

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UNUSUAL CHANCE TO DISPLAY GOODS.

I write thus fully, not in the interest of the exposition, but for the benefit of American manufacturers who might find here an unusual chance to place their goods on exhibition, side by side with the competing products of other countries. In every line of goods for which an Italian market is sought my reply to such manufacturers as address me for information is that, above all other considerations, the first is to place the machine or the product, whatever it is, actually on the ground for the inspection and tests of those who are expected to buy it. Seeing is believing just as much in Europe as it is at home. There is neither the disposition nor the necessity to buy unseen things. In dozens of lines of manufactures now seeking a market here the Europeans are themselves supplying the local demand with machines and products not at all unsatisfactory either as to price or service. This is specially true of automobiles; it also applies in general. If the American manufacturer is to come into this field in a way which will produce business for a foreign article entirely unknown to this market, he must make good his claims by actual performances and justify both them and the price which the higher cost of American labor not infrequently imposes.

AMERICAN MISCONCEPTION.

It is my judgment that among many American manufacturers there is not a little misconception of Continental trade conditions, and that our American spirit of enterprise sometimes makes us forget that European manufacturers have been in the field longer than we have and that they possess some opportunities superior to our own. The Italians, in particular, are exceedingly clever in anything pertaining to machinery. Their ability to copy successfully machines made in other countries is remarkable. They are keenly alive, not only to the fact that they might supply their own home markets from their own workshops, but that they might enter the export trade as one of the strongest competitors of American manufacturers. There are in and about Milan to-day a dozen factories capable of competing in the manufacture of automobiles, paper bags and wrappings, tools, engravings and engraving machinery, electrical and other machines and their parts, and of many other articles with American manufacturers, no matter how enterprising the latter may be. The greatest thing for the Italian automobile trade which has occurred this year is the success of one of the principal Italian machines in a series of races. Perhaps few people in the world are more impressed by actual successful performance than are those of southern Europe.

It is to these people, and to the whole of Europe and the world besides, that the Milan Exposition will appeal. The best from every active industrial country will be set out in the exhibits. Our strongest competitors are to make the strongest showing. I believe that the absence of American displays in the fair will be understood on the Continent generally, and particularly in Italy, as a not altogether promising justification of our claims in trade. With competition what it is and what it threatens to be, American manufacturers have much to gain if they exhibit at Milan in 1906, and, per contra. they will lose much if they fail to so exhibit.

Exposition literature will be sent to interested persons upon request made to the Milan consulate.

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TO ORGANIZE FARMERS.

FURTHER MOVEMENT IN ITALY ON THE AMERICAN PLAN.

Consul Dunning reports that there is being circulated through the newspapers of Italy a long review of the proposition made last year by Mr. David Lubin, a well-known American, to organize the farmers of the world for mutual protection and benefits through the study of the larger problems affecting agriculture. It will be remembered that Mr. Lubin took his proposition first to the King of Italy, since Italian agriculturists are supposed to be in need of assistance of this kind, and are about the only farmers of the world who lack it. The King was so impressed with the suggestion that he wrote and published a pamphlet which was sent throughout the world and was widely and favorably commented on for its intelligent grasp of the situation. Recently a conference was held in Rome, in pursuance of the intention of Mr. Lubin and his friends to organize a general institute for agriculturists, in which questions bearing upon farming and the production and sale of crops could be discussed.

The review of Mr. Lubin's plan mentioned above is written by an Italian who, like Mr. Lubin, has made a study of the agricultural conditions in various countries. He criticises the Rome conference because it was silent as to the attitude of the proposed organization to the trusts, and a large part of his discussion is given to that phase of the question. He insists that discussion of the internal problems of agriculture throughout the world, while interesting in themselves, will be of no use so long as agriculture is under the influence of conflicting forces outside itself—meaning the combinations of trade which the critic conceives tend to embarrass the farmer in all countries. "There should be organized," he writes, "a great cooperative agricultural movement, like that in which Germany is already so conspicuous, to work against the coalitions of industries and trades which constantly menace the farmer. Such is being done in Germany and ought to be done in Italy and other countries. A united protest of international agricultural interests, it is no doubt, could be made possible. This is Mr. Lubin's idea."

It will be observed that the American's plan has been considerably projected by the Italian reviewer. The latter also holds that an international institute would be quite unable to influence sales of products, further emphasizing his attack against the "trusts" by maintaining that the great usefulness of Mr. Lubin's scheme would be in its control of purchases made by agricultural interests in all countries. In short, his argument simmers down to a plain demand for an agricultural "trust" to combat the other combinations on their own ground. While the review is attracting some attention and is being prominently placed before the people of Italy and other countries in Europe, no one familiar with Mr. Lubin's plans, and having read the pamphlet written by the King of Italy, will allow it to confuse his understanding of the American's intentions and of the hearty cooperation given him by Victor Emanuel's Government. The general understanding here of the Lubin plan is that it deals solely with agricultural questions without regard to politics and related only incidentally to economics.

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AUSTRIA.

HUNGARIAN BEAN CROP.

FARMERS GOING OVER TO INTENSIVE CULTURE.

Consul Chester, of Budapest, reports a movement among Hungarian farmers to increase their bean acreage. He writes:

According to a private report just published more and more Hungarian small farms are devoting their energy to the production of beans suitable for the city markets and export, following the French system. The yearly consumption of beans in both Europe and America has extraordinarily risen, hence Hungarian agricultural societies are propagating the production, while the Hungarian Agricultural Academy in Magyaróvár, Moson County, Hungary, is collecting samples of the most exported kinds of beans.

The drought last year entirely ruined Hungary's bean crop, as well as those of several other European countries, and only the crop of 1903 served to cover the needs of the year, though 2,199,759 pounds were imported from Austria, Bosnia, Germany, Roumania, Servia, British India, and Bulgaria. The quality of the Lima beans shipped to various European ports was found unsatisfactory, and high prices in Hungary and elsewhere in Europe resulted.

EFFECTS OF WEATHER.

The weather this year has not favored the bean crop of Hungary. Practically only a part of the home consumption is covered. Only a weak crop will be realized in the Theiss districts, Bács County, Szerém County (Slavonia), and the Transylvanian counties. The weather was favorable until July, and advance sales for September delivery were unfortunately made. Nevertheless, the color and general appearance of the beans are satisfactory. The price paid in August for fine white beans went up from $4 per 220 pounds to $4.80. Yet competition is expected from America (United States and Canada). Only from 1 to 3 crowns difference per 100 kilos exists between the various grades. Not the demand from without but the lack of supplies from within has raised the prices in Budapest, where only 1,000 to 1,200 carloads have so far found a market.

From the foregoing it will be seen that in certain years Hungary can import a fair amount of beans. The duty in Hungary and Austria on beans and pease is at present only 1 gold florin (say 50 cents) per 100 kilos (220.46 pounds).

COMMERCIAL EXPERT.

Consul Chester, of Budapest, reports that the Hungarian minister of commerce appointed a second commercial correspondent of the Royal Hungarian Commercial Museum to the United States, with a commission fixing the location of his office in New York City. The appointee is Mr. Emil Zerkowitz, formerly editor of the Kiviteli Szemle (Export Review). His duty will be to promote the consumption in the United States of Hungarian industrial and agricultural

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products, including their introduction and placing on the market, with special reference to the immediate needs of the Hungarians settled in the United States. Besides following export openings, establishing business connections, giving information to home firms, accepting or placing commissions, and obtaining offers from home firms, he will report quarterly to the minister of commerce in Budapest on credit, packing, transportation, etc.

CONSUL-GENERAL CHESTER, of Budapest, reports that according to official information given him at the Hungarian ministry of commerce, goods exported from Hungary are not required to be marked with the name of the country of origin. Forwarding agents (expressmen) in Hungary may be foreigners and are not required to ship goods by Hungarian lines (water or land).

DENMARK.

COOPERATION AMONG FARMERS.

INTERESTING FEATURES OF DANISH INDUSTRIAL LIFE.

Consul Walter C. Hamm, of Hull, England, sends the following interesting account of cooperation among farmers in Denmark, as given by the leader of a party of Yorkshire farmers who recently visited Denmark to study methods of agriculture. He says:

The Cooperative Dairy at Esbjerg has a membership of 230 farmers, milking 1,500 cows. A small quantity of the milk is retailed in Esbjerg; the bulk, however, is made into butter, and practically speaking, all exported to England. The milk is paid for by weight and quality. The manager, who receives $750 per annum, embraces in himself the functions of managing director, manager, working foreman, and clerk, his clerking being done during the afternoon after the butter is made. The board of directors of such a concern get virtually no remuneration.

The Danish cooperative butter and egg rooms were next visited. This society has fifty separate dairies scattered over different parts of the north and west of Denmark, where the butter is made, then sent on to headquarters at Esbjerg to be blended and made one uniform quality before exportation to England. The membership embraces 30,000 farmers, and the society is shipping 4,000,000 pounds of butter yearly.

The egg department was then inspected. Eggs are sent in weekly from the different depots, each egg being stamped by the farmer with a rubber stamp with figures representing name of farmer, district, and date, so that any bad egg can be easily traced back to the farmer who sent it. Every egg is tested, the method being to place the eggs on perforated trays holding up to 120 each. The tray when full is put over a strong electric light in a dark room, the light being confined in a kind of wood washing sink, so as to concentrate all the light on the eggs. It is only the work of a moment to separate the good from the bad, the former being bright and clear, the latter dull and muddy. On the farmer who has sent the bad ones a fine is imposed for each

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bad egg. This method soon sharpens the farmer's wife, and she takes good care to see that the nests are cleared every day, and any doubtful ones kept for home use. The eggs are paid for by weight, so much a pound, not by number, and are all graded in packing into three different sizes. The farmer is paid weekly on a quotation fixed in accordance with market prices in London or Copenhagen.

CONTROLLING THE MARKET.

In order to avoid putting too many eggs on the market when the price is low, and still further depressing it, immense quantities are preserved in hugh vats of lime and water, with an air-tight covering of water glass. These are sold as eggs become scarcer and dearer, so that the farmer has not to dispose of his eggs when there is a glut on the market, nor has he or his wife to trudge miles with a heavy basket to the market and then accept any price that is going. They can stay at home and look after the work of the farm. The turnover in this society in butter and eggs is about $2,500,000 per annum; cost of buildings and plant between $65,000 and $76,000. It has only been established ten years and is still growing, especially in the egg department.

Other egg societies at Odense and Haslev were visited. The latter, though only established two years, has already a membership of 450 farmers and has a rapidly increasing trade. The estimated cost of collecting, forwarding to central depot, grading, testing, and packing for export is about 2 cents per dozen. The egg societies are growing more rapidly than either the butter or bacon societies, but it must be remembered that the former are only in their infancy.

The bacon factory at Haslev has a membership of 900 farmers who supplied 13,000 hogs last year. It has been established eight years. That at Odense has a membership of 5,000 farmers who last year supplied 70,000 hogs from all over the Isle of Fyen. At the entrance to the factory are posted the day's prices for first, second, and third quality hogs, so that any one can see current quotations, or a farmer can by telephone ascertain the current price, and then decide whether he will send in his hogs or not.

COOPERATION.

All these societies are purely cooperative. The farmers in a district meet together to establish a cooperative society to deal with their produce—milk, hogs, and eggs. Each one undertakes to supply the factory with a certain amount of produce. A dairy has to be built and machinery bought. No prospectus is issued, nor are there any shareholders. How, then, is the money raised? Each farmer signs a document by which he is held responsible, not for a part of the money that must be borrowed, but for all. Say, for example, that $10,000 has to be raised for cost of building, plant, etc., and that 200 farmers become members of the society. Every one of the 200 signs his responsibility for the $10,000, so that if the 199 can not meet their liabilities the remaining one is bound for the loan. Actual experience, however, proves that in Denmark no risk whatever is attached to this. Armed with such a bond there is not the slightest difficulty in borrowing the money at a low rate of interest. Banks or loan

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companies are only too glad to lend on such a security. The dairy is then built and equipped, a chairman and small committee of management appointed, their pay being practically nothing, these in turn appoint a skilled manager, the milk is delivered at the dairy, made into butter, and either sold by the dairy direct to England or if the dairy is too small it affiliates itself to a larger dairy, and so the produce is disposed of.

The price to be paid for milk, hogs, and eggs is settled by the weekly quotations for butter, bacon, and eggs in Copenhagen or London, a certain margin being left for working expenses. At the end of the year the balance sheet is made out, all expenses paid, including interest on loan and depreciation, and the balance is distributed as bonus to each farmer in accordance with the amount of produce he has sent.

Bacon factories are established in the same way. The Egg Society is the simplest and least costly of all, and is often worked as a branch of the Bacon or Butter Society.

The farmers of England, Russia, Canada, and other countries are studying these cooperative methods of the Danish farmers in order to introduce them elsewhere.

NETHERLANDS.

DUTCH DAIRIES FOSTERED.

BUTTER MAKING STIMULATED BY THE GOVERNMENT.

Consul Mahin, of Nottingham, reports on successful efforts made by the Dutch Government and farmers to revive butter making in Holland. He says a visiting body of editors of British agricultural journals visited the Netherlands and saw much to encourage the belief that butter is to take its former place among Dutch dairy products. His report follows:

A party of editors of British agricultural journals who recently made a visit to Holland returned with information which surprised them and the readers of the publications to whom they imparted it. Dutch agriculture, and especially Dutch butter, has been decried in this country, but the observations of these journalists go to show that however just the derogatory opinion may once have been it is no longer warranted. Much of the credit for the change is given to the fostering care of the Netherlands authorities. The farmers themselves initiated the improvements, but the Government cordially seconded them in various important ways. Much of Holland's soil is specially adapted to pastures. Cattle breeding has been for centuries a chief industry, but in late years special attention has been given to dairying. Dutch cheese, such as Edam, has for many years been a famous product, but butter was pushed into the background.

WHAT THE EDITORS FOUND.

The agricultural editors found it in favor again. Low prices of cereals led farmers to grow green fodder—a natural step toward but-

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ter making. In 1879 the first butter factory was established. Gradually others followed, till now creameries are numerous all over the country. In districts with a small number of cows the creameries are hand worked; where cows are numerous steam power is applied. The majority are cooperative, numbering 705 in 1903, noncooperative 229. Later figures are not given, but it is understood that the number is at present still greater. Many of the factories also make cheese. Thus, butter making has in the past twenty-five years been transferred in main part from farm to creamery, with the result not only of increasing output but also of vastly improving quality. The Government has been a great help in this change. Much important information has been collected and made available to the farmers. The Government experimental stations make numerous experiments in connection with cattle feeding and milk production; lectures are given by Government teachers of agriculture and other experts, with a view to pointing out to owners of cattle what important advantages can be secured by proper breeding, by the cultivation and purchase of the most suitable feeding stuffs, by careful treatment of the cattle, and by rational feeding; dairy experts appointed by the provincial agricultural societies, which receive a Government grant for the purpose, are continually instructing cattle owners in everything they require to know in order to secure a good and plentiful supply of milk; and these experts give advice and information wherever defects in the milk are discovered or mistakes are made in the preparation of butter or cheese.

MADE TO MEET POPULAR TASTE.

The butter is made both fresh and salt, to suit the wants of buyers, particularly in the export trade, which is being assiduously cultivated, with encouraging results. In the large creameries all the latest mechanical devices are used. The cream and skim milk are generally pasteurized, and refrigerating and ice-making plants are attached to many creameries. In dealing with the milk all kinds of centrifugal systems are used, and a practically complete separation of the cream is aimed at. As a rule, hardly one-tenth per cent of fat remains in the separated milk, this being about one-thirtieth part of the quantity of fat in new milk.

In various parts of Holland are "butter control stations," which are described in detail by the agricultural editors. A chemist is at the head of each station, with a staff of analysts under him. Inspectors, instructed by the chemist, unexpectedly visit dairies, stores, creameries, etc., and collect samples of butter and all materials used in it. These samples are analyzed, and the results are registered, so that the officials connected with the "control" know almost exactly what the chemical composition is of the butter at each creamery, etc., and at any time of the year. The analyst has, therefore, all information necessary to give an absolute opinion as regards the purity of samples of butter made at creameries that have joined the control station or system. By comparing the composition of the samples of butter submitted for analysis with the results of the analyses of samples of butter made at the same creamery and at the same time of the year under official supervision, there is no difficulty in obtaining a certain opinion in each case as to whether or not the butter has been adulterated. The composition must in both cases be the same, and the slightest fraud is immediately detected by this system of control.

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GOVERNMENT SUPERVISION.

The control stations are under the supervision of the Government, and all butter sent out from creameries that are under control bears a Government stamp. This stamp is affixed on a very thin paper label. Each label bears also a different number and a letter. Batches of labels are supplied to the creameries working under the control system, and the number, etc., on each label is registered in the books of the Government, so that when a label is seen upon a given package of butter in England, in Germany, or in any other part of the world, it can immediately be ascertained from what creamery the butter came and the date upon which it was made and exported. In this way the butter is traced to its source.

It is an evident inducement to farmers and creameries to make only a genuine article that better prices are realized when they work under the butter-control system; but, on the other hand, should they be caught tampering with their commodity they suffer a very severe penalty. It is said that not a single case of fraud has yet been detected against a producer working under the control system. It would seem that the labels might be taken off a package of butter and used again by some unscrupulous person, but even this one loophole for possible fraud is closed by the thinness of the label and its being impressed against the butter by a stamp, so that it can not be removed without tearing it.

The British editors discovered still other things in Holland that materially increased their respect for the natives of that country as agriculturists.

RUSSIA.

THE FOREIGN TRADE.

DECLINE IN IMPORTS FROM THE UNITED STATES.

Consul Smith, of Moscow, sends a timely report of Russia's foreign trade for 1904. There is a slight falling off in imports from the United States compared with 1903. This is due largely to a curtailment in the purchases of cotton. The report follows:

The foreign trade of Russia for the year 1904 amounted to $769,250,000 against $775,600,000 for the year 1903, viz: Exports, $477,500,000, an increase of $2,650,000 over those of 1903; imports, $291,750,000, a decrease of $9,000,000 from the exports of 1903—a decrease in the total trade of 1904 of $6,350,000.

Exports by groups of articles.

Groups.	1903.	1904.
Cereals and provisions	$297,750,000	$307,450,000
Raw materials	156,300,000	150,400,000
Animals	10,100,000	8,050,000
Manufactures	10,700,000	11,600,000
Total	474,850,000	477,500,000

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The cereals exported in 1904 amounted to $247,650,000, an increase of $8,850,000 compared with 1903.

Exports by countries.

Country.	Value.	Country.	Value.
Germany	$117,050,000	Roumania	$4,500,000
Great Britain	115,400,000	Spain	4,250,000
Holland	49,500,000	Norway	4,150,000
France	30,950,000	East Indies	2,950,000
Italy	26,500,000	United States	2,150,000
Belgium	22,050,000	Egypt	2,150,000
Austria-Hungary	20,200,000	Finland	23,150,000
Denmark	15,000,000	Other countries	19,550,000
Turkey	12,400,000		
Sweden	5,600,000	Total	477,500,000

Imports by groups of articles.

Groups.	1903.	1904.
Provisions	$43,700,000	$46,300,000
Raw materials	171,400,000	166,400,000
Animals	800,000	750,000
Manufactures	84,850,000	78,300,000
Total	300,750,000	291,750,000

Imports by countries.

Country.	Value.	Country.	Value.
Germany	$112,600,000	Norway	$3,850,000
Great Britain	51,250,000	Belgium	3,400,000
United States	31,250,000	Denmark	3,300,000
France	13,050,000	Turkey	3,050,000
Austria-Hungary	10,700,000	Sweden	2,600,000
China	9,550,000	Finland	12,252,000
Egypt	7,900,000	Other countries	12,298,000
Holland	5,600,000		
Italy	4,750,000	Total	291,750,000
East Indies	4,350,000		

The imports from the United States show a decrease of $6,500 compared with 1903, the principal article being cotton, which was imported during the year 1904 to the amount of $23,359,500.

NISHNY-NOVGOROD FAIR.

The total amount of business transacted at the fair at Nishny-Novgorod, which just closed, was $65,000,000. Business was very brisk on account of the large Government orders. The Government placed orders for 9,000,000 arshines (1 arshine = 28 inches) of cloth for military clothing, an increase of 100 per cent against last year's orders. Notwithstanding the high prices prevailing for raw materials, the prices paid by the Government insure a good profit to the manufacturers. Money was plentiful and there was no protest of bills of exchange as in former years.

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SHORTAGE OF FUEL.

According to the British Board of Trade Journal, the British ambassador at St. Petersburg reports that the ministry of ways of communication have made over stock in their possession amounting to 4,000,000 poods (1 pood equals 36 pounds) to the Volga navigation companies. The total shortage of fuel employed by industrial undertakings is estimated by the ministry of finance at 50,000,000 poods, to meet which 90,000,000 poods of coal are stated to be required. The production of coal in Russia, calculated at 1,000,000,000 poods, is not, says the finance minister, sufficient to meet the increased demand. The Vistula and Baltic State railways are stated to have decided to acquire 10,000,000 poods of foreign coal.

FOREIGN COAL PURCHASED.

Consul-General Guenther, of Frankfort, Germany, reports that the Russian minister of public communications has issued an order permitting the State railroads to import foreign coal. The Moscow-Kasan Railroad has already ordered about 130,000 tons of English coal. This new demand may cause an advance in the price of English coal, which supplies the coal stations at the ports of South America, Australia, Asia, Africa, and the Mediterranean. Already Great Britain has put an export duty on coal shipped from her home ports to protect her industries, for which reason it will have to be increased before many years have passed.

THE SPRING CROP.

Consul-General Watts, of St. Petersburg, writes that the Russian spring crops will be a failure. He reports as follows:

A vast part of Russia will suffer from bad spring weather. The rural section of the ministry of the interior reports poor crops in 22 provinces. The Government has advanced 4,000,000 rubles for winter-sowing seed. No doubt advances will be made also for the supply of provisions and for the spring-sowing seed; indeed, the ministry of the interior has made a communication to that effect to the ministry of finance. It is intended to relieve the population of the said provinces from paying the arrears of taxes and to organize public works for them. According to reports of some governors, the present failure of crops in their districts will be almost as extensive as that of 1891 and 1892; but as the result of the spring crops in the northern provinces is not as yet fully ascertained, it is known that in some of these the crops are quite equal to the average.

It is reported that the Russian Government has restricted the exportation of grain.

Vice-Consul Stuart, of Batoum, reports that the chief of the Batoum customs-house has been instructed by the Russian ministry of finance to admit goods of American origin at the same rates as those imposed on goods from other countries that have heretofore been admitted under the conventional tariff. He incloses a list of articles that are affected by this order.

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NORWAY.

AMERICAN TRADE.

NEED FOR DIRECT IMPORTATIONS.

It is time, Consul Rasmusen, of Stavanger, thinks, for the United States to take steps to secure direct trade relations with Norway. He points out the difficulties that beset Norwegian business houses that are trying to deal directly with American producers. At present it seems to be impossible, owing to intervening trust agencies, for American business houses to import direct from the United States, as Consul Rasmusen points out in the following report:

Concerning the slow development of trade with the United States in this consular district, I have to report that American exporters are largely to blame. The continuance of exclusive agencies in some of the larger European ports for articles in general demand is a detriment; it restricts sales. Complaints have been received at this consulate from importers at Stavanger that it was difficult to get into direct communication with American exporters; that many of them were represented by general agents in certain European ports, who had exclusive sale of certain articles, and thereby controlled the trade therein, and, as far as this district is concerned, it is almost impossible to make direct transactions.

An importer in Stavanger negotiated with an agency in Denmark for a consignment of cotton-seed meal, with a view to having it shipped direct to Stavanger. On February 18, 1905, he received a communication wherein the general agent in Denmark stated that the Hamburg Importing Syndicate had compelled them to enter into an agreement to sell to certain importers only in Germany, but that they were free to sell to other countries, and quoted prices. Thereupon the importer here chartered a steamer, owned here in Norway, to transport the cargo from one of the gulf ports to Stavanger at 14 shillings ($3.41) per ton, but he received immediate notice that the cargo would have to be shipped via Hamburg, and that the charges would be 24 shillings ($5.96) f. o. b. Hamburg. At this higher rate of transportation, with additional transfer charges at the latter port, and freight from there to Norway, the price would be prohibitive. As a matter of course the sale fell through.

A short time after this it was rumored that the syndicate controlling this article had been broken and the importer at Stavanger promptly took the matter up again, renewing his former proposition, intimating that since the syndicate had been dissolved there was nothing to hinder the deal. He received a communication stating that the syndicate had not dissolved, neither was it likely to do so.

The trade between Norway and the United States is steadily increasing, and if some of the difficulties in the way of a more direct intercourse can be removed or remedied to the extent that transportation is not diverted and imports credited to other countries, the exports from the United States to Norway will increase.

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AMERICAN WHEAT.

A LARGE TRADE MAY BE SECURED.

Consul Cunningham, of Bergen, writes that grains and their products are the most important Norwegian imports, amounting to 20 per cent of the total, and are valued at $13,000,000 to $15,000,000 a year. Rye and barley lead, though there is a considerable importation of maize, wheat, and oats. Wheat flour leads the list of flours and meals. Most of the grains imported come from the ports of southern Russia; the flours and meals seem to come mostly from Germany. A large quantity down to the credit of Germany doubtless comes from the United States and other countries, but is transshipped from German ports. Bergen, Christiania, and Trondhjem, in the order named, are the important cereal trade centers.

Wheat flour is the only article in the list that shows, or promises well, for the United States. The present prospects of a large crop indicate an opportunity that might be made much of were American millers and cereal merchants to go over the ground carefully. The proximity of the two countries, their mutual respect for each other, the number of Norwegians in the United States, the improved transportation facilities now in vogue, point to a particularly great possibility of a large cereal trade being built up.

The following table gives the countries supplying Norway with cereals and the amounts imported from each:

Country.	1903.	1904.	Country.	1903.	1904.
	Pounds.	*Pounds.*		*Pounds.*	*Pounds.*
Sweden	2,829,510	5,174,268	Great Britain	9,662,026	15,078,052
Denmark	33,391,600	29,945,696	France	1,052,590	3,118,808
Ireland	11,110	.....	Portugal	1,936	.....
Russia:			Spain	11,264	2,200
Arctic ports	13,413,928	25,543,936	Roumania	29,460,266	.....
Baltic ports	880,110	825,946	Turkey	7,788,374	6,145,260
Black Sea ports	828,802,414	683,580,898	Austria	.....	11,000
Germany	218,340,210	265,741,586	Hungary	.....	10,780
Netherlands	5,554,252	6,715,060	United States	23,933,404	5,523,540
Belgium	12,559,690	8,519,918	Argentina	.....	5,200,426

SWEDEN.

METHOD OF GATHERING CROP REPORTS.

Consul Berg, writing from Gothenburg, Sweden, speaks of the method employed by the Swedish Government in obtaining crop reports, and gives a summary of the report for August. He says:

According to the royal circular of March 21, 1902, it is the duty of the agricultural societies in the different counties to send in, at the beginning of each of the months June-October, to the department of agriculture a report on the crop prospects (or results) for the preceding month. For this purpose the agricultural societies have divided their respective territories into certain districts—319 in all. Qualified men, one within each district, make up the statements on printed forms,

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in which the expected or actual crop results, for each kind of crop, is to be represented by a figure according to the following scale of points: 5, very good crop; 4, good; 3, middling; 2, poor; 1, very poor crop. The reports from the different districts are then consolidated in the department of agriculture so as to show the average figures for the different counties and for the country at large.

I give the average figures in decimal for the whole country for the month of August:

Winter wheat	3.6	Winter rye	4.1
Barley	3.2	Oats	3.2
Maslin	3.2	Legumes	3.2
Potatoes	4.1	Sugar beets	4.9

Hay, on natural meadows, 2.7; on tilled ground, 3.

USE OF ELECTRICITY.

RIVERS BEING HARNESSED FOR INDUSTRIAL PURPOSES.

According to Consul Bergh, of Gothenburg, all the streams of Sweden with a fall of water sufficient to generate electricity are soon to be harnessed for industrial purposes. The consul says companies are being organized with the foregoing object in view. He says:

The company "Sydsvenska Elektriska Aktiebolaget" is on the point of being incorporated and registered. The business of the company will be to buy real estate and waterfalls and erect plants for the production, distribution, and use of electric power, and allied branches of business. The seat of the board of directors will be the city of Halmstad. The minimum capital stock will be $938,000 and the maximum $2,680,000.

A plan to utilize the water power of the river Lagan has been worked out. The plan is that the company shall, to begin with, purchase the unused waterfalls in the river Lagan, and build seven power stations there. Smaller operation plan includes ten larger places to which electric power is to be transmitted. According to this smaller plan, which is to be carried out first, the transmissions, with branch lines, will be 186 miles long and capable of distributing 13,000 horsepower. When complete plans have been carried out the last-named figures will be doubled.

For carrying out the small plan, the cost is calculated to be $2,760,400, but the larger system will cost about $1,072,000 more. The specifications for the sum first mentioned are as follows: For waterworks buildings, $911,200; for machinery, $402,000; for transmission cables and wires, $482,400; and for regulating the access and supply of water, $268,000. It is intended to make the price of the electric power so low that the same can compete with the cheapest motive power obtained in any other manner, and as soon as certain contracts with the communities named have been signed the work can begin. It is considered that the negotiations and the work on the different power plants will take two years before any power can be distributed.

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GREECE.

THE CURRANT TRADE.

PRODUCTION, EXPORTATION, AND VALUE TO GREECE.

Mr. Charles S. Wilson, secretary of legation at Athens, furnishes an interesting report on the reduction of currants in Greece, together with the context of a convention between the Greek treasury and the Bank of Athens, the main purpose of which is to promote cultivation and stimulate exportation, a copy of which is on file with the Bureau of Manufactures. Mr. Wilson's report follows:

The most important agricultural product of Greece is the dried currant, and the actual condition of the country is regulated by two facts, (1) the dried currant, the production of which surpasses the demand, and (2) the question of wheat, which is not raised in sufficient quantity to supply the wants of the country. The last session of Parliament passed important laws on both these matters and it is hoped that an improved economic condition will result. In 1830 the vineyards producing the dried, or Corinth, currant covered an area of only 3,800 hectares, producing about 10,000,000 venetian pounds of fruit, or an average of 2,600 pounds per hectare. In 1851 the area had increased to 27,257 hectares, and the production to 86,000,000 pounds. In 1871 the vineyards covered 34,631 hectares, producing 150,000,000 pounds, or 4,300 pounds per hectare. At this last date the phylloxera appeared in France, causing a great demand for the Greek currant, the price of which rapidly rose, and the plantations in the Peloponnesus and the Ionian Islands increased enormously. In 1881, 50,000 hectares were given up to the cultivation of this fruit, producing 263,000,000 venetian pounds, or 5,250 pounds per hectare. In 1891 the progress continued with 67,000 hectares with a crop of 343,000,000 pounds, and finally in 1903 the limit was reached with a crop of 387,000,000 pounds produced on 75,000 hectares, averaging 5,160 pounds per hectare.

All the vineyards producing the Corinth currant are situated in the Peloponnesus, the Ionian Islands, and Eupoca, and all attempts to introduce its cultivation into other parts of Greece, as well as Europe and California, have failed, as an entirely different grape is produced as a result of transplantation. Besides the Corinth raisin a small quantity of Sultana raisin is produced in Greece, which brings a price two or three times greater than the former.

The following table shows the production and exportation and the value, in francs, of the Corinth currant from 1890 to 1904:

Year.	Production.	Exported.	Value.
	Pounds.	*Pounds.*	*Francs.*
1890	311,000,000	300,384,000	48,124,000
1891	343,000,000	378,095,000	60,495,000
1892	237,000,000	252,874,000	40,460,000
1893	349,000,000	294,713,000	47,154,000
1894	315,000,000	322,127,000	22,549,000
1895	375,000,000	310,060,000	21,704,000
1896	328,000,000	338,279,000	23,679,000
1897	273,000,000	222,067,000	33,300,000
1898	357,000,000	247,788,000	37,168,000
1899	303,000,000	251,783,000	37,765,000
1900	93,000,000	148,386,000	52,553,000
1901	298,000,000	219,055,000	40,807,000
1902	335,000,000	239,952,000	22,405,000
1903	387,000,000	238,260,000	24,788,000
1904	347,000,000	224,875,000	28,396,000

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In 1892 the French demand for the currants, which in 1889–90 had been 70,000 tons, diminished, and in 1897 ceased entirely.

FOSTERED BY THE GOVERNMENT.

The mean annual production of currants during the period 1895–1904 has been 306,600,000 Venetian pounds, while the mean exportation for the same period has not exceeded 244,100,000 pounds, thus leaving annually in the country 62,500,000 pounds. A severe crisis naturally resulted, and the Greek Parliament passed a series of laws by which 15 per cent, and later 20 per cent, of the amount of currants exported was retained as a tax. Finally, in 1899, a currant bank was established to take charge of this "retention," and also to buy up all currants of an inferior quality, which were injuring the market. The currants retained could not be exported, but were sold by the currant bank to local distilleries. As a result of these measures, in 1895, 1896, 1897, and 1898 the Government received by the retention tax 147,000,000 pounds, of which it was able to sell only 131,000,000 pounds for the sum of 7,743,000 drachmas.

Owing to the large crop of 1902, the crisis became more acute, and in 1903 a bill creating a "monopoly for the sale of dried currants" was presented to the Greek Parliament by a group of English capitalists. To this monopoly the Governments of England, Germany, and Holland protested, on the ground that it violated conditions of their commercial treaties with Greece, and as the Greek ministry changed at this time the bill was never voted upon. In 1903 the currant crop was the largest ever produced in Greece, and naturally the situation became worse, so that the Government was obliged to pass new relief measures. The currant bank was authorized to borrow money to increase its purchases in order to keep up prices, and also the 15 per cent tax paid on currants exported was to be paid in kind, which, with the 20 per cent retention tax also paid in kind, disposed of 35 per cent of the currants exported. In addition, the planting of new vines was forbidden by law. As none of these measures brought much improvement, the Greek Parliament at its last session adopted a convention for the regulation of the currant trade.

SHIP CANAL EXTENSION.

Consul Horton, of Athens, writes that the Austrian-Lloyd Steamship Company has been making experiments with some of its larger vessels to ascertain if they can pass through the Corinthian Canal, and thus save the long and expensive trip around the Peloponnesus. One of the largest of the company's Mediterranean boats has been towed safely through the canal. Agents have been conferring with representatives of the canal company with a view of securing the deepening of the canal if this proves necessary, and it is probable that other steamship companies will be interested in the same enterprise. The Corinth Canal is 6,300 meters long, 8 meters deep, 21 meters wide at the bottom, and 24.60 meters wide at the surface of the sea. The company is capitalized at 5,000,000 francs, divided into 10,000 shares of 500 francs. Shares are now quoted at 10 drachmas ($1.66⅔) each.

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FOREIGN COMMERCE.

LARGE INCREASE IN TEN YEARS.

Mr. Wilson, reporting on the foreign commerce of Greece, says there is a 21 per cent increase in less than ten years. He writes:

The foreign commerce of Greece in 1896 was about $23,260,000 imports and $14,500,000 exports. In 1904 it was: Imports, $27,540,000; exports, $18,260,000. The following table shows the foreign trade expressed in millions of francs:

Articles.	Imports.		Exports.	
	1896.	1904.	1896.	1904.
Live stock	2.9	6.9	0.1	0.0
Animal products	4.5	5.9	2.9	3.4
Fish products	5.7	5.4	1.3	0.2
Agricultural products	36.7	35.4	31.1	43.5
Oil and seed	0.6	2.7	4.2	7.0
Forest products	4.5	12.4	3.7	1.9
Minerals	13.2	12.3	17.4	19.2
Chemicals and drugs	8.0	6.8	0.8	0.3
Wines and liquors	0.3	0.3	6.2	11.4
Cloth, etc	22.8	22.7	0.2	0.2
Worked metals	3.6	7.8	4.1	2.5
Miscellaneous	13.5	19.1	0.5	1.4
Total	116.3	137.7	72.5	91.3

The following table shows the exports and imports of Greece according to the country of their origin in 1896 and in 1902, the last year for which the figures are available. Between these dates Austria-Hungary and Russia chiefly have increased the amount of their goods imported into Greece, consisting mostly of cereals. Next comes France with 2,800,000 francs and Italy with 2,600,000 francs. The exports of Greece to all these countries except Turkey and Russia have increased, as will be seen from the following table, by countries in millions of francs:

Countries.	1896.		1902.	
	Imports.	Exports.	Imports.	Exports.
England	29.4	18.2	28.7	20.0
Russia	24.1	7.6	30.8	1.9
Turkey	14.4	7.9	11.9	6.4
Austria-Hungary	11.8	6.9	21.2	9.3
Germany	10.2	3.3	11.0	7.3
France	8.5	6.5	11.3	7.9
United States	4.5	2.7	3.2	4.1
Italy	2.9	3.9	5.5	4.7
Other countries	10.5	15.5	13.6	18.1
Total	116.3	72.5	137.2	79.7

THE MERCHANT MARINE.

Greece is making considerable progress in building up her merchant marine. It is the Greek industry which has made the greatest progress during the last decade, the growth of which is shown by the following statement. Moreover, it appears that in proportion to its population Greece owns a larger mercantile fleet than any other country of Europe, excepting England, Norway, and Denmark.

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The Greek merchant marine shows a steady decline in sailing vessels from 1,165 in 1897, of 246,429 tons, to 889 in 1904, of 170,147 tons, but a gain in steamers from 109—tonnage, net 92,492—to 201 ships of 214,841 net tons.

AUTOMOBILES.

GROWING DEMAND—COST AND CLASSIFICATION.

In view of the rapid growth in the demand for first-class automobiles and the remarkable success achieved in their construction in the United States, the following report on automobiles in Greece, from Consul Horton, of Athens, will give manufacturers an idea of the demand in that part of the world.

There are twelve automobiles in this consular district, or, to speak more definitely, in the city of Athens. Three of these belong to the King and the princes. His Majesty's automobile is quite a luxurious affair, and is said to have cost some 20,000 francs ($3,860). That owned by Prince Andreas was presented to him by the Czar of Russia.

Most of the automobiles in use here were bought in France at a cost of from 4,000 to 10,000 francs ($772 to $1,930). Three new ones are now on their way to this country.

Automobiles are classed by the tariff law as four-wheeled carriages, which, upholstered or not, used or unused, pay a duty of 300 francs ($57.90) each, besides octroi, etc.

In the case of a high-priced carriage, with sumptuous furnishings, duty is assessed on value declared in invoice and bill of lading, and importers are advised to obtain an invoice from the Greek consul in the country from which the shipment is made. In this latter case the duties are 20 per cent of assessed value, $25 octroi, and 5 per cent on the 20 per cent.

Parts or accessories to autos pay according to their assessed value.

Automobiles are classed as carriages for the reason that machinery is admitted into Greece free of duty.

OLIVE OIL CROP.

Acting Consul Lontos, of Patras, Greece, in writing about the prospects for a splendid crop of olive oil in the island of Corfu, says:

The average olive oil crop of the island of Corfu for the last fifteen years has been one-tenth of what it used to be. The average age of the olive trees is from three hundred to four hundred years; they are very little cultivated, and the small production in recent years can not be set down to the age of the trees, as ten or fifteen years ought not to make any appreciable difference in a life of three hundred to seven hundred years. One thing that militates against the healthfulness of the trees is the prevalence of damp southerly winds, which prove very ruinous, especially to the young trees, causing worms and injury from flies. These winds occur in the months of September and October.

The prospects for the coming crop are most encouraging; much better than for many years, and if the southerly winds do not play their usual havoc the production of olive oil this year will far exceed that of any year since 1890.

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INDUSTRIAL NOTES.

CONSUL HORTON, of Athens, writes that the great ministry of justice is considering the feasibility of appropriating the 1,700,000 drachmas left to the State by the banker Singros for philanthropic purposes to the building of up-to-date prisons. If this is done, one of these prisons will be erected near Athens, at a cost of 1,000,000 drachmas, and 7 others in various smaller cities of Greece, at a cost of 100,000 drachmas each. At present rates of exchange there are about 5.95 drachmas to the dollar.

THE GREEK GOVERNMENT proposes to discard its old artillery at an early date in order to replace it with new guns and belongings. It is suggested that any manufacturer desiring further information should communicate in French with the Greek war department. The consul adds that an agent of the Krupps resides in Athens.

A BRITISH firm has been in Greece making surveys, with a view to furnishing the city with an adequate water supply. It is proposed to bring water from an almost inexhaustible supply at Stymphalia, about 88 miles from Athens. The English company expects to be able to submit its plans to the Greek Government by November. It is estimated that about $5,000,000 will be required to carry out this scheme.

A COMPANY has been formed for the propagation of domestic fowls in Greece by scientific methods. The experiments will be conducted on a large estate at Amarousi, a village a few miles from Athens. The manager of the company is D. Zographos, who will doubtless be interested in incubators, etc. He can be addressed care of the bank of Athens.

TURKEY.

TRADE WITH THE UNITED STATES.

ADDITIONAL BANKING AND TRANSPORTATION FACILITIES NEEDED.

Vice-Consul Ojalvo, of Trebizond, urges that efforts be made to open a branch United States banking business in Constantinople. He thinks it would help American trade with that part of the East. He writes:

Trebizond being the port of entry for Erzerum, Van, Bitlis, and all the towns in the interior of the province, is also the port of entry for goods forwarded by caravan route to Persia. Merchandise going to those places has to be handled here, packed suitably for the journey—which takes from twelve days to two months, according to the destination—and kept here in depots belonging to the transit agents till opportunity presents itself for transportation by caravan. Sometimes goods destined for Persia and for even the interior of this province have to wait in Trebizond for several weeks.

BANKING FACILITIES AND CURRENCY.

While this place has several houses, besides the Imperial Ottoman Bank, doing business with nearly every city in Europe, there is none

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connected with the United States, which hampers the development of our commerce in this province. A merchant who places an order in the United States, if he sends the money in advance, pays, generally, 3 to 5 per cent more than when he remits to Europe; if he pays against documents, his account is reduced to French or English money, for which reduction he is made to pay 3 to 5 per cent extra. A great thing will have been accomplished when some American banking house will establish a branch office in Constantinople.

Nearly 75 per cent of the merchants of this city deal directly with Europe. Being practical business men, however, they are always anxious to obtain credit for long terms. This is because they have to pay their bankers 9 to 12 per cent interest.

IMPORTS AND EXPORTS.

The value of imports entered at the port of Trebizond during the calendar year 1904 amounted to $11,007,512 and the exports to $5,276,588, divided as follows:

IMPORTS.

From—	Value.	From—	Value.
Imports for consumption:		Imports in transit for Persia:	
England	$1,509,470	England	$1,235,316
Turkey	1,783,854	Turkey	525,772
Egypt	24,075	Austria	961,914
Austria	990,025	Germany	320,883
Germany	394,498	France	330,038
France	902,707	Italy	259,145
Russia	468,311	United States	69,644
Italy	343,454	Russia	21,440
Belgium	308,023		
United States	84,793	Total for transit to Persia	3,724,152
Greece	326,799		
Bulgaria	10,390	Grand total	11,007,512
South America	100,178		
Holland	11,189		
Denmark	25,594		
Total	7,283,360		

EXPORTS.

To—	Value.	To—	Value.
England	$789,608	Greece	$19,084
United States	133,173	Balkan States	52,823
Egypt	2,927,091	Spain	3,538
Austria	321,468	Denmark	6,807
Germany	162,290	Italy	19,403
France	453,969	Holland	243,486
Belgium	23,321		
Russia	120,526	Total	5,276,587

The exports in transit for Persia are included in the above table.

CONSUL HILL, of Amsterdam, reports the shipments of diamonds from his consular district during the fiscal year 1905 at $9,627,083, of which $8,465,329 were polished. The remainder were in the rough.

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SOUTH AMERICA.

ARGENTINA.

ANALYSIS OF THE IMPORT TRADE.

RELATIVE STATUS OF THE PRINCIPAL EXPORTING COUNTRIES—STEADY PROGRESS BEING MADE BY THE UNITED STATES.

Special Agent Hutchinson, in a letter from Buenos Ayres dated August 29, furnishes an interesting and instructive analysis of the import trade of Argentina, which can not fail to arrest the attention of all who are concerned in the extension of our commerce with South America. His letter follows:

Considerable comment is being caused here just now by a dispatch which appeared a few days ago in La Prensa, one of the leading daily papers of Buenos Ayres, concerning the trade of the United States with Argentina. The following is a translation:

"NEW YORK, *August 25.*—The newspapers of this city are commenting on the figures just published concerning the foreign commerce of the Argentine Republic, and lamenting the fact that European nations hold a larger share of the trade than the United States. They point out that the exports from Great Britain to the Argentine Republic are greater than those of France, Germany, and the United States combined. According to figures made public by the Bureau of Statistics, the United States in the year 1904–5 exported to the Argentine Republic merchandise to the value of $23,654,000, showing an increase of $6,600,000 over the exports of 1903–4 and $12,127,000 over those of 1902–3. The imports of Argentine products rose to $15,316,000, showing an increase of $5,300,000 and $6,100,000, respectively, over the two preceding years. The opinion of the newspapers is that this growth is not satisfactory when we take into consideration the growth of trade which has also taken place between the Argentine Republic and the principal European nations."

I have quoted this item in full because it so well illustrates a certain tendency, which is noticeable, to minimize the importance of the commercial relations between the United States and Argentina. Though I have been in Buenos Ayres only a little over one week, I have already met a considerable number of men who claim that the United States can never be an important factor in Argentine trade, as the two countries are in certain respects commercial rivals. One of these men, in particular, is in a position to give his opinion considerable weight in the community, for he is the editor of a large and influential paper.

BAD EFFECTS OF MISINFORMATION.

It is sufficiently unfortunate to have such a feeling prevalent here, but it is even worse to find such opinions gaining credence at home, for the effect must be to discourage effort on the part of our exporters. The statement quoted above by no means stands alone. One has but

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to look through the various articles on South American trade published in the magazines of the United States in the last few years to discover how widespread this sort of pessimism is. A few quotations may not be out of place. One writer says: "The volume of our trade with the South American countries is small, and is likely to remain small." "We have made but little progress," writes another, "except in the countries nearest us—as Mexico, Central America, and the West Indies." Still another states that "there is, therefore, every reason for the continuance and extension of the trade between eastern South America and Europe, and many reasons against the development of trade between that section and the United States." And a prominent citizen of Buenos Ayres writes: "The United States can not be a commercial friend of Argentina."

The chief cause of this pessimistic view of the situation seems to be the alleged fact that "the exports from Great Britain to the Argentine Republic are greater than those of France, Germany, and the United States combined." A few years ago this was true, as is shown by the following figures showing the percentages of Argentine imports from the countries named:

From—	1898.
	Per cent.
United States	10.4
Germany	11.7
France	9.9
All three	32.0
England	36.3

But the relative amounts have changed considerably in the last few years and the percentages are now quite different. The figures are:

Country.	1903.	1904.	1905.[a]
	Per cent.	*Per cent.*	*Per cent.*
United States	12.7	13.1	14.0
Germany	13.0	13.3	14.6
France	9.7	9.1	10.5
All three	35.4	35.5	39.1
England	34.2	34.4	32.3

[a] First six months.

ENGLAND'S SUPREMACY EXPLAINED.

Nevertheless, while it is not literally true that England's exports to Argentina are equal to those of her three greatest rivals combined, the preponderance of her trade in this market is an undisputed fact which must be reckoned with. In spite of the decline indicated in the above figures, England's exports amount to more than twice as much as those of any other country. But when we remember that England developed her enormous foreign trade while other nations were yet in their commercial infancy, that she was first in the South American field with manufactured goods, and that her capitalists really control the financial situation here, the wonder becomes not that England's share of the trade is so great, but that other nations have been able to make headway against such odds. That they are making headway is manifest. Germany's share increased from 11.7 per

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cent in 1898 to 14.6 per cent for the first six months of 1905, France's from 9.9 to 10.5 per cent, the United States' from 10.4 to 14 per cent These statements are based on Argentine figures, and they probably understate rather than overstate the importance of the trade of the United States as compared with the European countries. Germany, France, and especially England carry on a vast amount of transshipment trade, and it is probable that large amounts of goods which are entered in Argentine ports as coming from these three countries really originate elsewhere. The United States, on the other hand, does but little transshipping, and goods declared here as coming from our ports probably do originate in our country. The comparisons are therefore vitiated. Thus it is safer in judging of American success in trade to make use of our own export statistics and those of the various European countries rather than the import statistics of Argentina. These figures I have been unable to obtain for all the countries in question later than 1903, but they show a trend of development which later figures will unquestionably confirm.

SIGNIFICANT STATISTICS.

To avoid uncertainties introduced by violent and abnormal fluctuations due to special causes, I give the statistics for two five-year periods, 1894–1898 and 1899–1903. The figures show the annual average value of domestic exports to Argentina from the several countries named in five-year periods. The period 1894–1898 is compared with that of 1899–1903, and the average annual percentage of increase is shown. The figures are as follows:

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$5,260,000	$10,540,000	100.4
United Kingdom	26,201,000	33,116,000	26.4
Germany	9,153,000	13,742,000	50.1
France	9,658,000	9,828,000	1.8
Belgium	3,262,000	3,619,000	10.9
Italy	9,659,000	12,032,000	25.7

The United States' exports have, therefore, increased over 100 per cent in the same time that Germany's have risen only 50; England's, 26, and France's less than 2. Such progress can hardly be called "unsatisfactory."

The question naturally arises as to what particular commodities are responsible for our increased trade, and an examination of the figures reveals some most significant facts. The average annual value of the chief exports from the United States to Argentina during the period 1899–1903 were:

Iron and steel manufactures	$4,431,000
Includes:	
Agricultural machinery and implements	1,933,000
All other machinery	866,000
Includes sewing machines	163,400
Wire	506,000
Builders' hardware, saws, tools, etc	508,000
Wood, and manufactures of	1,615,000
Includes wood, unmanufactured	1,440,000
Mineral oil	1,209,000
Cordage, twines, etc	758,000

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Railway and street cars	$400,000
Chemicals, drugs, medicines, etc	351,000
Cotton manufactures	224,000
Scientific instruments, etc	213,000
Leather, and manufactures of	128,400
Paper, and manufactures of	93,200
Clocks and watches	26,600
Woolen manufactures	17,400

WHAT THE FIGURES SHOW.

A detailed examination of the progress of trade in these eighteen classes and subclasses of commodities shows:

(1) That in every one of them, with the single exception of cotton manufactures, the trade of the United States has increased in the five years, 1899–1903, as compared with the preceding five years.

(2) That in all but three of the cases in which the trade of the United States has increased the increase is greater than that of any of the principal competing countries.

(3) That in seven of the above classes of goods the United States takes first rank as an exporter to Argentina, and in five, second rank. In six cases only do we fall to third place or lower.

In the tables that follow, showing exports to Argentina in the two five-year periods compared, the figures show average values per annum.

Iron and steel manufactures.

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$1,647,000	$4,431,000	169.0
United Kingdom	6,267,000	8,980,000	43.3
Germany	2,565,000	4,285,000	67.0
France	441,000	575,000	30.4
Belgium	1,048,000	1,319,000	25.8

The United States has risen from third place, with 14 per cent of the total from the five countries, to second place, with nearly 23 per cent.

All machinery (included in iron and steel).

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$1,236,000	$2,800,000	126.5
United Kingdom	1,806,000	2,528,000	38.8
Germany	286,000	633,000	121.3
France	148,000	179,000	20.9
Belgium	87,200	73,700	−15.5

The United States has risen from second place, with 35 per cent of the total, to first place, with 45 per cent.

Agricultural machinery (included in all machinery).

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$833,000	$1,933,000	132.1
United Kingdom	731,000	698,000	−4.4
Germany	.....	37,600	.....

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The exports of agricultural machinery, etc., from France and Belgium are not sufficiently stated in the official reports to make exact comparisons possible, but their amounts are small. For Germany the figures are not separately stated prior to 1900, and the above amount is the annual average for the four years 1900–1903. The chief imports of Argentina are seen to be from the United States and England, and the phenomenal growth of America's share in the trade is clearly shown. For the first period our exports were only slightly greater than England's; in the second period, they are nearly three times as large as hers.

Iron and steel wire (included in iron and steel).

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$85,200	$506,400	495.8
United Kingdom	166,600	298,000	78.4
Germany	912,700	889,200	a 2.6
Belgium	10,000	12,000	20.0

a Decrease.

The United States has risen from third place, with 7 per cent of the total, to second place, with 30 per cent of the total. At the same time our strongest competitor, Germany, which held 77 per cent of the trade during the first period, has fallen off to 52 per cent of the total. England has increased, but is now far behind the United States.

Builders' hardware, saws and tools, nails, screws, rivets, etc., locks and hinges, cutlery, etc. (included in iron and steel).

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$322,000	$508,000	57.7
United Kingdom	490,000	615,000	25.4
France	145,000	201,000	38.8

The German exports of these goods are so differently classified that it is impossible to make accurate comparisons. The showing made by the United States in comparison with the other two principal competitors is distinctly favorable. We are still considerably behind England, which holds the first place, but our business is increasing more than twice as fast hers.

Sewing machines (included in all machinery).

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$81,600	$163,400	100.0
United Kingdom	61,400	106,200	72.4
Germany	81,200	99,200	22.5

The United States and Germany were virtually equal during the first five-year period. Both have increased their sales, but American exports have risen so much more rapidly than German that we now sell 65 per cent more than Germany does.

The United States holds a virtual monopoly of the unmanufactured

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wood trade and the sales show a satisfactory increase of nearly 45 per cent, from $994,000 per annum in the first period to $1,440,000 per annum in the second.

Manufactures of wood.

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$93,200	$175,200	88.4
United Kingdom	50,600	90,600	78.4
Germany	199,700	212,100	6.1
Belgium	58,400	92,800	60.0
France	63,900	109,800	71.6
Italy [a]	175,100	277,100	58.3

[a] The figures for Italy include straw goods, about one-third of the total.

The United States occupies third place in both the periods, but our rate of increase is greater than that of any of our competitors and the outlook is by no means unfavorable. Our share in the total trade has increased from 15 per cent in the first period to 18 per cent in the second, while Italy's has remained almost stationary and Germany's has fallen from 31 per cent to 22 per cent.

Cordage, twines, etc.

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$334,000	$758,000	126.9
United Kingdom	240,000	203,000	15.4
Germany	11,700	26,700	135.9
Belgium	51,100	61,000	19.6

The United States and England together control the bulk of the trade, but while England has declined the United States has advanced rapidly. We now sell to Argentina nearly four times as much of these goods as England, and our control of the market seems well assured. Germany, it is true, shows a very rapid rate of advance, but her sales are small, being only one twenty-eighth of those of the United States.

Railway carriages and parts.

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$109,600	$400,000	263.7
United Kingdom	520,000	1,388,000	166.9
Germany	4,000	18,300	350.0
Belgium	67,000	228,500	241.8

Germany's share in this trade is so small as to be negligible. The other three—the United States, England, and Belgium—all show a marked increase between the two periods, but the United States has gained more rapidly than the other two. From 1894 to 1898 England, which holds the first place, sold five times as much of these goods to Argentina as the United States; in 1899–1903 her sales were less than three and one-half times as much as ours.

Mineral oil (refined petroleum).

The United States of course holds a monopoly of the Argentine market, and our sales therefore increase with the general increase of

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demand. For the five years 1894–1898 our sales averaged $855,000 per annum. From 1899 to 1903 they were $1,209,000 per annum, an increase of 41.5 per cent.

Chemicals, drugs, medicines, etc.

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$164,000	$350,600	114.0
United Kingdom	82,800	75,000	−9.6
Germany	359,400	449,600	25.3
France	185,900	293,200	57.5
Belgium	29,100	32,600	13.8
Italy	103,600	212,900	104.8

The principal competitors are Germany, France, Italy, and the United States. The United States has risen from third place, with 18 per cent of the total trade, to second place, with 25 per cent. Germany still occupies first place, but her share, which during the first period was 39 per cent, has fallen to 32 per cent. France remains in third place, with 20 per cent of the total, while Italy's somewhat smaller share has increased from 11 to 15 per cent. Germany's exports now are only about one-quarter larger than those of the United States.

Scientific instruments and apparatus.

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$85,000	$213,400	150.6
United Kingdom	115,900	159,700	37.9
Germany	83,100	118,000	42.2
Italy	42,400	98,800	135.7

The United States exports have increased so rapidly that we have risen from second place, with only 26 per cent of the total, to first place, with over 36 per cent. Our nearest competitor, England, holds only 27 per cent.

Clocks and watches.

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$26,000	$26,600	3.8
United Kingdom	2,700	6,500	133.3
Germany	25,700	79,300	208.8
France and Switzerland	128,900	149,600	16.3

In these goods our showing is a distinctly unfavorable one, our two principal competitors not only exporting much larger amounts than we, but also increasing much more rapidly.

Leather and manufactures thereof.

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$9,600	$128,400	1,180.0
United Kingdom	196,700	200,600	2.0
Germany	268,400	295,600	10.4
France	760,000	640,400	−15.8
Italy	16,800	80,100	370.6

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Our share in this trade during the first period was insignificant and is still relatively small, our percentage of the total being less than 10. But the enormous strides which we have been making (an increase from less than $10,000 to over $128,000 between the two periods) gives promise for the future, especially as our strongest competitor, France, shows a decided decrease (nearly 16 per cent), and the two next strongest are increasing their sales but slowly.

Paper and manufactures thereof.

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$30,200	$93,200	210.0
United Kingdom	126,600	123,700	− 2.4
Germany	602,600	758,700	25.9
France	245,100	196,300	−20.0
Belgium	85,100	65,200	−23.5
Italy	387,500	632,300	62.9

Our share of this trade is very small, but is increasing. During the first period we supplied 2 per cent of the total, in the second period 5 per cent. The position of the other competitors has, however, changed noticeably. England, France, and Belgium, which together held 31 per cent of the trade during the first period, have all declined, their combined share during the second period being only 20 per cent. Germany and Italy have both increased, and during the second period controlled nearly 75 per cent of the market.

The two remaining items in the list of principal exports from the United States to Argentina are cottons and woolens. In neither of these does the United States seem to be making any progress. England continues to hold the largest portion of the trade, but is being pressed by Germany, Italy, and, to a less degree, by France. The figures are as follows:

Cotton manufactures.

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$286,000	$224,000	− 21.7
United Kingdom	7,405,000	8,510,000	14.9
Germany	1,244,000	1,839,000	47.8
France	125,000	256,000	104.8
Belgium	437,000	360,000	− 17.6
Italy	2,232,000	3,921,000	75.7

Woolen manufactures.

Country.	1894–1898.	1899–1903.	Per cent increase.
United States	$2,300	$17,400	656.5
United Kingdom	2,157,000	2,175,000	.8
Germany	761,000	931,000	22.7
France	1,263,000	643,000	− 49.8
Belgium	159,000	110,000	− 30.8
Italy	270,000	437,000	61.9

In cottons the share of the United States is small and decreasing. In woolens there is a marked increase, but the amount of exports is so

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insignificant that no encouragement can be drawn from that fact. The truth seems to be that we can not yet compete in this market in these goods.

STEADY ADVANCE BY THE UNITED STATES.

The figures which I have been giving at such length constitute a conclusive argument against the pessimistic view of our competition in Argentina. The classes of goods with which these statistics deal include all the most important items in our trade with this country, and in nearly all of them we find encouraging features. In the two classes of textile goods, cottons and woolens, it is true that we can hardly be said to compete at all as yet; but these two classes together constitute only 2 per cent of our total exports to Argentina, and our failure in regard to them is not a true index of our position in this market. In regard to clocks and watches, too, we have found the figures distinctly unfavorable to the United States, but our exports of these articles also constitute an insignificant portion of our total exports to Argentina. In all the larger items of the list the figures show that we are making rapid strides. We stand first in the exports of machinery (totals), agricultural machinery and implements, sewing machines, wood (unmanufactured), cordage and twines, mineral oil, and scientific instruments and apparatus. We stand second in iron and steel manufactures (totals), wire, builders' hardware and tools, etc., railway carriages, and chemicals, drugs, medicines, etc., and our share in the total trade of all these is increasing. In paper and leather goods our share is as yet small, but we are increasing our sales to such an extent as to give good promise for the future, and the same is true of manufactures of wood.

The tables given above include goods which together make up about 90 per cent of the total exports from the United States to Argentina and about 60 per cent of the latter country's total foreign purchases. The other 40 per cent of Argentine imports is made up largely of articles in which the United States does not, as yet, compete—such as coal, wines, porcelain, etc. But our success along those lines in which we have already been competing indicates not only that we are likely to continue to increase our sales of those articles but that there are no insuperable obstacles to our entering the market with others of our products as well.

AGRICULTURAL MACHINERY.

VALUE OF THE ARGENTINA MARKET—AMERICAN MACHINES PREFERRED—WHAT MUST BE DONE TO MAINTAIN SUPREMACY.

The letter of Special Agent Hutchinson on the use of agricultural implements in Argentina will be found valuable to manufacturers in the United States of those articles. The character of the machinery used, the countries from which received, and the average annual values, together with suggestions regarding methods that should be adopted by American manufacturers to maintain their present supremacy in the Argentina market are plainly pointed out. American machines are preferred and American manufacturers supply about 70 per cent of the total. Mr. Hutchinson declares that our manufac-

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turers must recognize existing conditions and construct machinery to meet the peculiar needs of the country if American supremacy is to be maintained. His letter, which is dated at Parana, Argentina, September 8, follows:

Since forwarding my last report I have been gathering information as to the imports into this country of agricultural machinery and implements and American success in the competition. I have interviewed representative men both in Buenos Ayres, where most of the importing business is done, and in the great agricultural and pastoral Provinces of Santa Fe and Entre Rios, where I have been making a tour of several days. The conclusions I have been able to form are, therefore, I believe, general in their character and applicable to the import business in this class of goods throughout the country as a whole.

In a country such as Argentina, where agriculture and grazing occupy the almost exclusive attention of the great mass of the people, the supply of agricultural machinery and tools must naturally form a considerable part of the import trade, and the official figures show that purchases of these articles are made each year to the value of four and one-quarter millions of dollars gold (equal to about $4,000,000 U. S. gold). It is equally natural that the people here should turn to the United States, as the greatest agricultural country in the world and the largest manufacturer of machinery, for the supply of these goods. Accordingly, it is no surprise to find that nearly 70 per cent of Argentina's purchases of such articles come from the United States. The same goods constitute over 17 per cent of the total sales of all commodities which the United States, on her part, makes to Argentina. The importance of the trade to us is, therefore, great.

VALUE OF RECENT IMPORTS.

Argentine official figures of imports in recent years are given in the annexed table for the periods 1895–1898 and 1899–1903, together with the annual averages and the several importing countries:

Country.	Average 1895–1898.	Per cent of total.	Average 1899–1903.	Per cent of total.
Germany	$29,200	3.3	$167,600	7.0
United States	584,000	66.3	1,643,500	68.5
United Kingdom	230,200	26.1	529,700	22.1
All others	38,100	4.3	59,900	2.4
Total	881,500	100.0	2,400,700	100.0

The United States is, therefore, not only the largest source of supply of these goods to Argentina but her share is increasing slowly, having risen from 66.3 per cent of the total in 1895–1898 to 68.5 per cent in 1899–1903. The figures for 1904 have not yet been published, but it is far from unlikely that they will show a further increase.

IMPORTANT QUESTIONS FOR AMERICANS.

These figures, in themselves, seem at first sight fairly satisfactory. But the really important question is not so much whether we are selling more to Argentina than our competitors are, but whether we are

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selling as much as we might. Why is it that the United States with her supposed superiority in the manufacture of agricultural machinery supplies only 68.5 per cent of Argentina's needs for this class of goods? Why not 90 or 95 per cent instead? The reasons are revealed in certain complaints which I find are common here, which might readily be overcome by a little closer attention on the part of our manufacturers to the peculiar needs of this market. They are, briefly, as follows:

1. Much of the American machinery, though well adapted to the needs of the home market, is not sufficiently durable for the kind of service which it sees in Argentine fields. Our manufacturers have given much attention to lightness and finish, and have produced a class of machines which in these respects are unequaled in the world; but in some respects they have overdone the matter, so far as the Argentine market is concerned. Light machines of fine finish are satisfactory in the home market, for the American farmer, as a rule, gives his machines careful use and reasonable attention. Here the reverse is true. The machines get the hardest kind of usage, and little effort is made to keep them in proper condition or to protect them from the weather when not in use. The consequence is that the percentage of breakage is very large, and the people are learning to prefer solidity to lightness and finish. American plows, for example, are said to wear out far sooner than their English rivals; plowshares have to be replaced with unnecessary frequency, while such implements as hoes, spades, shovels, etc., are distinctly in disfavor. With such machinery as thrashing machines and traction engines the difficulty is even greater, and the American goods are finding a much smaller sale here than the English.

SUGGESTIONS ABOUT REPAIRS.

2. Closely connected with the first difficulty is a second one, resulting from the very progressiveness of the American manufacturers which gives their machines such a high reputation at home. When portions of machines wear out or break here and have to be replaced it is often impossible to get duplicates. Improvements are found to have been made, exactly similar parts to those worn out or broken can not be found, and the farmer is forced either to get a complete new machine or to put up with repairs which are often very unsatisfactory. Our manufacturers seem to lose sight of the fact that the Argentine farmer is a long way from the great sources of supply. Even if the out-of-date duplicate parts are kept in supply at Buenos Ayres, which is seldom the case, it may take the farmer several weeks to get his order filled just at a time when weather conditions render it imperative that he should be most steadily at work.

The local dealer of course can not afford to keep on hand a supply of parts of machines of a pattern which has been replaced in the factory by the latest improvement. The English manufacturers avoid this difficulty by sticking closely and persistently to standard patterns, and both the Buenos Ayres importer and the local dealer is able to keep replaceable parts in stock. Besides this, I am told that the English manufacturer makes many of the smaller and more breakable parts of his machines of wrought iron, while the American uses castings. A breakage of the former is easily repaired temporarily by the

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local blacksmith, while as regards the latter such repairs are well-nigh impossible.

3. There are also other difficulties which affect the trade in agricultural implements and machinery, such as inferior banking and shipping facilities, which affect all lines of American imports alike. As they are not peculiar to the trade in the particular kind of goods which I am discussing at present, I shall not attempt to examine these difficulties in detail until I come to a more general analysis of trade conditions as a whole. A bare mention here is sufficient.

VALUE OF THE MARKET.

The difficulties described above under headings 1 and 2 are of a kind which could easily be overcome. The Argentine market for agricultural machinery is an extremely important one for us. It is well worth keeping and enlarging. But in order to do so the closest attention must be given to details such as those I have described. Lightness of machinery seems to have been pushed a little too far in a country where draft animals are very cheap, and where, consequently, the saving of a few pounds in weight is not a serious desideratum; progressiveness in making "improvements" has been a little overdone in providing goods for a market which is very far removed from the factories, and not quite enough attention has been given to keeping agencies supplied with duplicate parts, not only of the "latest" machines, but also of those several years out of date.

A TABLE TO BE STUDIED.

The above remarks do not apply to all classes of our machinery and implements alike. In some we are making a rapid and steady advance, which indicates that our manufacturers and exporters have hit upon exactly the right methods. In others we are progressing but slowly or even falling behind. The following figures, which I have compiled from the Argentine official records, are suggestive, as showing just where we have failed and where we have succeeded. They include all classes of agricultural machinery and implements imported into Argentina which are separately stated in the records. The figures give annual average values in the Argentine gold dollar, which is equal to 96.5 cents United States gold.

Description.	1895–1898.	Per cent of total.	1899–1903.	Per cent of total.
Plows:				
Germany	$12,800	10.7	$94,400	13.0
United States	95,500	79.9	530,200	72.9
United Kingdom	9,300	7.8	85,000	11.7
All others	1,900	1.6	17,400	2.4
Total	119,500	100.0	727,000	100.0
Plowshares:				
Germany	1,000	4.8	19,200	24.1
United States	13,000	61.9	44,400	55.8
United Kingdom	5,000	23.8	11,600	14.6
All others	2,000	9.5	4,400	5.5
Total	21,000	100.0	79,600	100.0

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Description.	1895–1898.	Per cent of total.	1899–1903.	Per cent of total.
Harvesters:				
Germany	$500	.2	$3,800	.5
United States	257,000	90.1	636,000	94.1
United Kingdom	25,800	9.0	30,300	4.5
All others	2,000	.7	6,100	.9
Total	285,300	100.0	676,200	100.0
Thrashers:				
Germany	9,800	6.1	34,000	7.6
United States	33,500	20.8	101,200	22.7
United Kingdom	107,500	66.9	311,200	69.7
All others	10,000	6.2	.....	.....
Total	160,800	100.0	446,400	100.0
Shovels, picks, hoes, etc.:				
Germany	2,800	2.8	3,400	2.8
United States	63,800	63.8	74,600	60.4
United Kingdom	32,000	32.0	41,200	33.3
All others	1,400	1.4	4,400	3.5
Total	100,000	100.0	123,600	100.0
Sowers:				
Germany	500	4.0	600	.7
United States	11,300	90.4	77,800	91.3
United Kingdom	300	2.4	2,400	2.8
All others	400	3.2	4,400	5.2
Total	12,500	100.0	85,200	100.0
Corn huskers:				
Germany	500	.5	1,000	1.5
United States	54,300	55.3	31,700	49.0
United Kingdom	41,500	42.2	32,000	49.5
All others	2,000	2.0	.....	.....
Total	98,300	100.0	64,700	100.0
Rakes:				
Germany	.....	.....	400	.8
United States	16,800	75.3	46,400	92.1
United Kingdom	5,000	22.4	3,000	5.9
All others	500	2.3	600	1.2
Total	22,300	100.0	50,400	100.0
Harrows (not entered separately prior to 1899):				
Germany	.....	.....	$4,800	19.8
United States	.....	.....	14,600	60.4
United Kingdom	.....	.....	3,400	14.0
All others	.....	.....	1,400	5.8
Total	.....	.....	24,200	100.0
Scythes:				
Germany	$500	2.9	800	5.1
United States	.....	.....	.....	.....
United Kingdom	250	1.5	400	2.6
Belgium	6,800	40.0	2,400	15.4
France	8,800	51.8	11,200	71.8
All others	650	3.8	800	5.1
Total	17,000	100.0	15,600	100.0
All others:				
Germany	800	1.8	5,200	4.8
United States	38,800	86.6	86,600	80.4
United Kingdom	3,500	7.8	9,200	8.5
All others	1,700	3.8	6,800	6.3
Total	44,800	100.0	107,800	100.0

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DEDUCTIONS FROM THE FIGURES.

These tables show:

1. That the United States holds the largest share of the trade in all of the more important classes of agricultural machinery and implements, with the single exception of thrashing machines. We are, it is true, also surpassed by other countries in scythes and in corn huskers, but the Argentine imports of both these articles is small and decreasing, and our decline in these respects has little significance. England has the lion's share of the trade in thrashers, for the reason already indicated above, that her machines, though heavier than the American, are more durable and can be more safely hauled about over the very rough country roads.

2. That although the United States holds the bulk of the trade in most of these classes of goods, in only four cases has her share in the total trade increased in the past five years. These are: Rakes, which have increased from 75.3 to 92.1 per cent; harvesters, which have risen from 90.1 to 94.1 per cent; thrashers, from 20.8 to 22.7 per cent, and sowers, from 90.4 to 91.3 per cent. Our exports of thrashers, however, as we have already seen, are small as compared with England's, so that there are only three classes—harvesters, sowers, and rakes—in which we can claim to be eminently and increasingly successful. Plows, plowshares, corn huskers, shovels, picks, hoes, etc., and all other agricultural machinery and implements, all show a decline in American sales as compared with those of our competitors. We still have the largest share in the trade in these articles, but our share is slightly smaller than it was five years ago.

OUR SUPREMACY THREATENED.

On the whole, therefore, the figures are fairly satisfactory, yet the satisfaction is tempered a little by the thought that American exporters are not doing quite all that they might. And there are indications that our supremacy may be threatened in time if we do not pay close attention to those lines of goods in which our position has already been slightly weakened. The most serious case is that of plows and plowshares. Argentina imports annually over $800,000 worth of these goods, and it can not be regarded as a matter of indifference that America's share in this total has declined in the last five years from 79.9 to 72.9 per cent, while England's has risen from 7.8 to 11.7 per cent and Germany's from 10.7 to 13 per cent.

PUBLIC IMPROVEMENTS.

CONSTRUCTION OF A DEEP-WATER HARBOR.

Mr. A. M. Beaupré, United States minister at Buenos Ayres, reports that, in accordance with the law passed July 31 last, by the Congress of Argentina, authorizing the construction of additional ports along the Atlantic coast, the Executive, with the cooperation of the ministry of public works, laid before Congress a general proposal for supplementing the facilities of the port of Bahia Blanca. By the terms of the bill the Executive is authorized "To have a deep-water port con-

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structed in the estuary of Bahia Blanca." Bids for the same are to be received during a period of not less than six months. The general conditions are as follows:

DESCRIPTION AND COST.

The port, to be constructed for the State and exploited by the same from the moment of its partial or total completion, shall be 9 meters and 14 centimeters (30 feet) deep at ordinary tides; its location shall be determined by the Executive. It shall be fitted with all the most modern appliances and the edifices necessary for the rapid discharge and loading of vessels. The contracting party is further called upon to supply a system of dredges, which he may use during the work of construction; for the use of these dredges there shall be deducted from the total cost of the work 6 per cent of the stipulated value of the dredges for every year that they shall be used and interest on the cost of the same at 5 per cent.

The cost of the work, inclusive of preliminary studies and of the above-mentioned dredges, shall not exceed $10,000,000 gold; and the work shall be divided into two sections, which may be contracted for separately if desirable, and of which the cost of the first shall not exceed $6,000,000 gold, and of the second $4,000,000. All material shall be admitted into the country free of duty and of every internal impost, and for the transportation of the same and of laborers within the country the discounts that the railways regularly allow to the State shall be accorded.

MANNER OF MAKING PAYMENTS.

The payment of the work is to be effected as follows: At the end of each month a certificate for the value of the work done during said month shall be given, the same to bear interest at 5 per cent from the first day of the succeeding month. When the first section shall be completed these certificates shall be replaced by a certificate for whole amount of the work and the interest on the individual certificates from the day of their emission. The final certificate for the whole amount shall be transferable and shall bear interest at 5 per cent and accumulative amortization at 1 per cent per annum. At the option of the Executive in place of these certificates there may be given bonds of internal debt at the same rate of interest and amortization.

At the same time that the contracting party offers its plans and estimates for the general works of the port he shall present separately estimates for the construction and exploitation, on his own account, during twenty-five years, of grain elevators and collieries, with the most modern appliances for the rapid loading and discharge of combustibles, all subject to the approval of the Executive. At the end of the twenty-five years all these installations shall become the property of the State, in perfect condition and without compensation.

These are the principal terms of the bill. While it is but a project, and has already been criticised as too vague and indefinite in its terms, yet it is the fruit of a law of Congress, and there is good reason to believe it will meet the approval of that body.

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PARAGUAY.

NEEDS OF THE REPUBLIC.

INDUSTRIAL AND COMMERCIAL CONDITIONS AND OUTLOOK—UNITED STATES HAS SMALL SHARE IN THE TRADE.

Writing from Asuncion, the capital of Paraguay, on September 18, Special Agent Hutchinson furnishes an interesting description of conditions in that country. After briefly describing its geography and the character of the population, Mr. Hutchinson explains the nature and extent of Paraguay's commerce. The exports are almost entirely agricultural, and aggregate about $2,500,000 per annum. The imports aggregate about $3,500,000 per annum, and are made up chiefly of articles of clothing and of machinery necessary to enable the people to carry on their agricultural pursuits. All the commercial countries of Europe outrank the United States in the value of imports to Paraguay, England having about one-third, followed by Germany, France, and Italy. The latest statistics obtainable, however, show that the imports from the United States, although far behind the figures of her great commercial rivals, are increasing. Cotton goods constitute the largest item among the articles imported, followed by manufactures of iron and steel. Mr. Hutchinson says the United States has not demonstrated ability to compete successfully in cotton goods with European countries, but that in manufactures of iron and steel there is reason to believe our manufacturers can obtain supremacy with intelligent and concentrated effort. His letter follows:

Paraguay and Bolivia are peculiar among South American Republics, in that they are the only ones of the ten which possess no seaboard, and are consequently dependent upon transshipment trade in a large part of their commercial dealings with foreign countries. In this respect, however, Paraguay is in far better position than Bolivia, for, in spite of her situation in the interior of the continent, she has cheaper communication with the sea through her great river systems of the Upper Parana and the Paraguay, which, joining their waters at the extreme southwestern corner of the country, give her direct water transportation to the River Plate ports of Argentina and Uruguay. Steamers of twelve or fifteen hundred tons burden navigate these rivers as far up as Asuncion, the capital of the country. By transshipment at Corrientes, goods may be carried by water also up the Upper Parana as far as the mid section of Eastern Paraguay, and by similar transshipment at Asuncion, up the Paraguay into the heart of the country and even beyond into central Brazil. It is true that the river service is far from being all that might be desired, the business being a monopoly in the hands of an Argentine company, but the completion of the projected railway across Eastern Paraguay and the southern States of Brazil to the Atlantic seaboard, which is only a question of time, will some day provide a competition which will reduce freights and offer better facilities.

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GEOGRAPHY AND NATURAL CHARACTERISTICS.

Paraguay lies between the latitudes of about 20° and 27½° south of the equator, at a general average altitude of only a few hundred feet above sea level. About one-quarter of its territory lies within the Tropics and three-quarters without; its climate being, therefore, mainly subtropical rather than tropical. The total area of the country is a little over 98,000 square miles, approximately the size of the States of New York and Pennsylvania combined, and its population (excluding the 130,000 or more Indians) is estimated at 700,000, giving a density of a little over seven to the square mile. These figures, however, hardly give a true picture of the country, for, both geographically and economically, it is divided into two quite distinct sections, Paraguay Oriental and Paraguay Occidental.

Paraguay Oriental is the roughly rectangular section included between the rivers Paraguay and Upper Parana and the frontiers of Brazil. It is mainly rolling forest land with a general elevation of some 500 feet above sea level, with several ranges of hills which reach in places an altitude of 2,000 feet or more. It has the healthier climate and is the better adapted for agricultural and pastoral pursuits, and consequently contains the bulk of the population of the entire country.

Paraguay Occidental, as its name implies, lies farther to the west, being all that part of the country included between the rivers Paraguay and Pilcomayo and the frontiers of Matto-Grosso and Bolivia. Its area is nearly the same as that of Paraguay Oriental, but its climate is moister and less healthy, the abundant rainfall is not drained off by the sluggish waterways, it abounds in swamps, forests, and jungles, and is chiefly inhabited by Indian tribes very little touched by civilization. Eastern Paraguay, rather than western, must, for a long time to come, remain the real economic center of the country.

A MIXED POPULATION.

The entire population of the country, as has already been said, consists of about 700,000 persons, without counting the 130,000 Indians. Of these 170,000 by far the larger part are the native Spanish-Americans. Immigration has supplied probably not over 1½ per cent of the present population. The immigrants, however, of whom probably two-thirds are of Latin race (mostly Italians) and one-third Germanic (mostly Germans), are of very excellent and energetic character and are playing an important part in developing the resources of the country. The native population has suffered much in the vicissitudes through which the country has passed, and the years of seeming unprogressiveness which have passed since the "great war" must not be regarded as necessarily characteristic of the future. That war, which ended in the defeat of Paraguay in 1870, left the country almost denuded of its male population. With only a fraction of its former population, with six women to one man left to till its fields and with its national resources exhausted, the little country was forced to set about the building up of a new prosperity. And it has met with an astonishing degree of success. It is true that it has not yet quite regained the position which it occupied before the war, but the rapid strides of the past fifteen or twenty years give promise that the near future will bring complete recovery. The population has increased no less than 133 per cent since 1886, and is now probably nearly if not

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quite equal to what it was before the disasters of the "sixties." Both imports and exports have almost returned to their former level, and immigration and investments of foreign capital are bringing about new developments of the great natural resources.

LACK OF MODERN UTILITIES.

Unfortunately the growth of population has been almost too rapid in some respects; the institutions of the country have failed to keep pace with it. Public instruction in a country where the children have been obliged to work has been neglected, while such modern facilities as railroads and telegraph and postal service are even now only in their infancy. There are only about 150 miles of railway in operation, though extensions are promised in the near future; about 500 miles of telegraph lines are operated; and, though there are nearly 150 post-offices in the country, the number of pieces of mail matter carried is very small, amounting to less than three pieces per annum per capita.

The population is essentially rural, and save the capital, Asuncion, which numbers some 60,000 souls, there are no cities. Most of the people live scattered throughout the western portion of Paraguay Oriental in groups known as "villas," or colonies, consisting of a central town surrounded by farms or ranches. Only seven of these groups number more than 10,000 inhabitants each—Villa Rica with 25,000, Villa Concepcion with 14,000, Villa Encarnacion with 11,000, Caazapá with 15,000, Luque with 15,000, Carapeguá with 14,000, and San Estanislao with 11,000. Most of the people live simply and cheaply, food is abundant and cheap, and clothing in a climate where freezing temperatures are almost unknown calls for but little outlay of money. There are, however, many signs of increasing wealth, numerous new and improved dwellings and other houses are in evidence in nearly every town, and there is lively interest in the possibilities of developing new export trade for the sake of the greater purchases of foreign conveniences and luxuries which it will make possible.

COMMERCE LIMITED TO AGRICULTURAL PRODUCTS.

The commerce of the country is of a character thoroughly in keeping with the rural life of the people. The exports are composed almost wholly of the products of the farm, the ranch, and the forest. In 1901, the latest year for which I have been able to obtain figures, shipments of goods to foreign countries were almost equally divided between these three classes of commodities, 33.9 per cent being agricultural, 35.9 per cent pastoral, and 30.2 per cent derived from the forests. The chief items for that year were expressed in United States dollars.

Hides:		
Dried	$272,000	
Salted	388,000	
		$660,000
Yerba mate	538,000	
Ground	40,000	
		578,000
Quebracho:		
Extract	352,000	
Logs	31,000	
Railroad sleepers	5,900	
		388,900

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Other hard woods:		
Mahogany	$72,000	
Rods	19,000	
Boards	7,100	
Posts	2,900	
Firewood	500	
Other	223,000	
		$324,500
Meat, salted	155,000	
Cattle	26,000	
Tallow	17,000	
Preserved tongues	3,700	
		201,700
Tobacco		139,800
Oranges		114,600
All other exports		216,500
Total exports		2,624,000

These figures should not be taken too literally as representing the true values of Paraguayan exports, for Paraguayan statistics are notoriously unreliable. It is probable, however, that they do give a fairly correct idea of the character of the exports and the relative values of the different articles. There is reason for supposing that the true value of exports is much greater than here stated, though there is no means of determining just how large the error is. It is difficult to believe that a country which has increased in population about 100 per cent since 1887 should have increased its exports only 20 per cent in the same period. The semiofficial figures state the exports of 1887 at $2,006,000 and those of 1901, as we have seen, at $2,624,000, but the statistics of transit trade from Paraguay through Argentine ports (and a very large part of Paraguayan trade passes through these ports) indicate that the increase must have been much larger. This transit trade alone has increased, according to Argentine figures, more than $1,500,000 in the time mentioned. Comparing 1896 with 1901, there appears an actual decrease in the total of Paraguayan exports from $2,732,000 to $2,624,000, while the transit of goods from Paraguay through Argentine ports increased $1,271,000. The two sets of figures are scarcely reconcilable, and of the two the Argentine are undoubtedly the more accurate.

CHARACTER OF IMPORTS.

The same remarks apply with less force to the import statistics. Paraguayan figures state the imports of 1896 at $1,800,000 and those of 1901 at $2,899,000; the growth of the Argentina transit trade during the same period corresponds fairly closely with this increase. There are, unfortunately, no figures available which give the details of imports, and for information on this point we are forced to rely on the very incomplete statistics of exports to Paraguay from the countries from which she makes her purchases. These statistics are extremely unsatisfactory for the reason already stated, that so large a part of Paraguay's trade passes through Argentine or Uruguayan ports that it is impossible to determine their real destination with any degree of certainty.

Of the large exporters to the South American country, only the United States, England, Germany, and Italy make any attempt to state the figures separately, and even with the utmost care it is a prac-

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tical certainty that at least 50 per cent of their goods which really go to Paraguay are entered among the exports to Argentina and Uruguay. The other large exporters have abandoned the attempt at accuracy and simply include exports to Paraguay among those to the two River Plata countries.

But, even although we can not rely upon the statistics of the exporting countries to determine the amount or value of their actual sales to Paraguay, it is possible to learn from them the kinds of goods which are sent and whether they are growing in amount. The recorded exports from the United States to Paraguay in the five years, 1899–1903, amounted to $11,800 per annum, the principal items being:

Locomotives	$1,800	Builders' hardware, etc	$620
Sewing machines	600	Cutlery	240
Boilers and parts of	250	Scientific instruments and apparatus	140
Pumps	500	Glassware	140
All other machinery	4,800	Kerosene (estimated)	1,000
Firearms	980		
Explosives	560		

COUNTRIES SUPPLYING IMPORTS.

England's exports are less fully reported. Their total value during the same five-year period was eleven times as large as those of the United States, amounting to $136,000 per annum. The chief items separately reported were:

Cotton goods	$77,600
Iron and steel manufactures	23,400
Including machinery	7,800

Italy's exports reached a total of $32,000 per annum, and the chief classes of goods were:

Cotton goods	$9,640	Provisions	$1,240
Woolen goods	3,560	Paper, and manufactures of	1,120
Wines, etc	2,400	Silk manufactures	920
Chemicals, drugs, etc	1,800	Wood manufactures	800
Breadstuffs	2,000		

The greatest detail is found in the German statistics. The total exports to Paraguay amounted to $110,000 per annum, and the principal items were:

Iron and steel manufactures	$33,600	Paper, and manufactures of	$7,000
Including—		Jewelry	5,100
Sewing machines	$1,000	Scientific instruments and apparatus	4,450
Boilers	900	Copper manufactures	3,250
Other machinery	11,400	Leather manufactures	3,200
Wire	6,150	Wood manufactures	2,850
Arms	300	Chemicals, drugs, etc	2,650
Cotton goods	14,750	Glassware	1,100
Woolen goods	7,750	Explosives	600
Wearing apparel	4,000	Clocks and watches	300
Silk manufactures	1,150		

CONCLUSIONS DRAWN FROM THE FIGURES.

In spite of the fact that all of these figures fall short of the actual amounts which Paraguay received from the countries mentioned, it is possible to draw from them certain fairly definite conclusions:

1. England's exports to Paraguay are larger than those of any of

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the other countries, while Germany's, though smaller, are sufficiently large to threaten England's supremacy in the market. America's share is small in comparison with the others.

2. By far the largest single item among the articles which Paraguay purchases abroad is textiles, principally cotton goods. Iron and steel manufactures are the next most important item, but they stand considerably behind textiles in aggregate value. Other articles of considerable, though much less, importance are paper, jewelry, scientific instruments and apparatus, chemicals and drugs, etc., wooden ware, leather goods, etc. In short, the chief articles obtained from the United States and Europe are materials for clothing the people and necessary implements and apparatus to enable them to carry on their very simple industries. The numerous other articles which are so common in more highly developed industrial countries, as necessary adjuncts to modern life, are very little in demand, and food stuffs are mainly produced at home.

The export figures of the principal countries from which Paraguay makes her purchases are useful also in furnishing an index to the growth of Paraguayan trade, and they reveal a remarkable development in the past few years. There is scarcely an item in the entire list which we have been examining that does not show an increase in the five years, 1899–1903, as compared with the preceding five years, and in nearly every instance the percentage of increase is very large. It is unnecessary to enter into details, for the figures of total exports to Paraguay from the countries mentioned tell the tale quite as well as those for the separate articles in the lists. England's exports show an increase from $47,700 per annum for the five years, 1894–1898, to $136,000 per annum for the five years, 1899–1903; Germany's, from $60,000 per annum to $110,000; the United States', from $400 to $11,800. Only Italy's exports have declined, being $36,000 per annum for the first period and $32,000 for the second. The decrease in this case was due to a great drop in the exports of provisions and wines, all other items except paper and leather having increased rapidly.

NEED FOR CONCENTRATED EFFORT.

These facts and figures, which have been stated at such length because they are absolutely necessary to an understanding of the commercial conditions which exist in Paraguay, clearly indicate the line along which American exporters should concentrate their efforts to increase trade. It is worse than useless to attempt to sell to any country classes of goods for which its stage of development has not yet fitted it. Paraguay can increase her imports only by developing her exports. The growth of exports must of necessity be confined to the products of the field, the ranch, and the forest; and the chief demand which the country can conceivably make for the products of the United States will be connected with the development of these three classes of industries. There can be no question that the growth of population which has been witnessed in the last decade or two will continue for a long time to come, for not only does the low cost of living favor the natural increase of the resident population, but the climate and resources of the country are such as to make it an ideal spot for immigration from many of the overcrowded sections of Europe. This increase of population will, in the main, accentuate the demand for only the two classes of foreign goods mentioned above—cottons for the

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clothing of the people and implements and tools for the development of their rural industries.

In regard to cotton goods the United States has not yet demonstrated her ability to compete successfully in such a market as this with the European countries which hold a virtual monopoly of the trade, but in the various articles of iron and steel which are necessary to a life of the farmer, the rancher, and the woodsman, there is every reason to believe that we might easily attain supremacy. Indeed, there are indications that we are already reaching out toward it, for the figures of our exports to Paraguay during the last two years show a most remarkable growth. The average for the five years 1899–1903 was, as we have seen, only $11,800 per annum; in 1904, the total rose to over $21,000, and in 1905 to over $40,000, and the increase has been due to just the class of goods mentioned above. If our manufacturers will concentrate their efforts for the sale of articles of this kind really valuable results may be expected.

LATEST OBTAINABLE STATISTICS.

Since writing the above report I have obtained semiofficial Paraguayan statistics of imports as late as 1904. They serve to confirm and emphasize the opinions already expressed as to the development of the trade of the country. The exports for 1901, as we have seen, amounted to $2,469,000 gold. In 1904 they had risen to $3,077,000. The imports show a similar increase, having grown from $2,899,000 in 1901 to $3,441,000 in 1904. Partial figures for 1905 indicate that the increase is being maintained. The general character of the exports remains about the same, the increase having affected all principal classes of shipments in approximately equal degree.

The imports still come in largest amount from England, with Germany as a close second. The share of the United States remains small, but is increasing encouragingly, having reached the sum of $121,000. The figures for 1904 in detail are (values expressed in United States gold):

Great Britain	$1,127,000	Spain	$200,000
Germany	857,000	United States	121,000
Argentina	421,000	All others	127,000
France	303,000		
Italy	285,000	Total	3,441,000

The figures also illustrate the incompleteness of statistics of exports to Paraguay from our country and others. Our export figures for 1904 show only $21,000 worth of goods sent to Paraguay in that year. The Paraguayan import figures are nearly six times as large.

CONSUL RUFFIN, of Asuncion, says that all merchandise coming from foreign countries to Paraguay, if shipped direct through, can now come without the necessity of a second bill of lading and consular invoice from Montevideo or Buenos Ayres. All bills of lading of merchandise arriving at either port, in transit for Paraguay, are now simply viséed by the consul at Paraguay. It is not necessary, as heretofore, to get out an additional bill of lading or consular certificate from the Paraguayan consul at either port of transshipment, thereby saving expense to the shipper.

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URUGUAY.

PUBLIC UTILITIES.

PLANS FOR CONSTRUCTION OF HIGHWAYS AND BRIDGES.

Consul O'Hara, of Montevideo, reports that the Government of Uruguay has negotiated a loan of $3,000,000, which is to be expended in the construction of highways and bridges. He says there are excellent opportunities for Americans to participate in this work. His report follows:

I have been informed that the General Government of this country has negotiated a loan of $3,000,000 Uruguayan gold ($3,102,000 American gold) to be expended, under Government supervision, in the construction of public highways and bridges in the interior of this country, and that it is the intention of the Government to purchase the latest improved machinery to be used in the work. This will necessarily include road-making machinery, such as graders, stone crushers, and road rollers, and also steel bridges. The materials for making good roads, such as stone and gravel, are abundant and easily obtained, and the surface is of such character that roads may be graded without great difficulty. While the interior of this country is fairly well settled, it has never known the luxury of a properly constructed highway. The roads used by the public are at present mere paths or trails, and are never worked, so that in the rainy season it is almost impossible to transport farm products over them. Then, too, there are many streams and rivers in the interior, some of them large, but very few provided with bridges. I am reliably informed that there are not more than three or four wagon bridges in the entire country, except in the Department of Montevideo.

POPULARITY OF THE ENTERPRISE.

The necessity for improvement along the line proposed has been felt by the people for many years and the proposed improvement frequently discussed, but owing to the disturbed internal conditions nothing has been done. It is now almost a year since the close of the last revolution, and local conditions have greatly improved. The country is becoming prosperous, revenue receipts are increasing month by month, and a general feeling prevails that Uruguay is to have an era of peace and prosperity. With the loan already made, the people fully awake to the necessity of good roads in the interior, and with a peace established which appears to be permanent I have no doubt but that the proposed work will be carried out, and if so it is only the beginning. The work now being provided for is national, and the first proposition is to build a road from this city through the central part of the Republic to Brazil, and after that will come the departmental roads, for the construction of which provisions are being made by the several departments, in connection with the Government. This Republic has an area of about 72,000 square miles, and is divided into 19 departments.

AMERICAN BUILDERS ADMONISHED.

It behooves the American manufacturers of the necessary machinery to be prepared to supply what is demanded. The sentiment is now in

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favor of American machinery, but it may change. The English, German, and French are here, have been here for many years, speak the language, and are throughout acquainted with the people and conditions. They are going to make a strong effort to get the business. I have full confidence in the ability of the American to win if he goes after the business with a determination to get it. The first thing necessary is descriptive catalogues printed in Spanish, and in my opinion the most effective work can be accomplished by agents who understand the language spoken here, either Spanish or French.

BRAZIL.

COMMERCIAL TRAVELERS IN PARA.

COMPLICATIONS THAT CONFRONT FOREIGN AGENTS.

Consul Ayme, of Para, sends a report on the obstacles put in the way of commercial travelers in Para. He points out that the tax, $426, is practically prohibitive. He adds that its avowed object is to force foreign business to put their goods into the hands of Para agents. He says:

It is absolutely impossible to-day for any foreign commercial traveler or salesman to do any business in this city if, as is always the case, such salesman depends on samples, catalogues, or anything else to assist him in explaining his business. The regulations affecting such salesmen have been equally hostile for a long time, but I have not hitherto reported on the matter, as the majority of the traveling salesmen who have been coming here for some years, and with whom I have had conversations on the subject, informed me that they had found ways in which to avoid the hardships of these regulations, and suggested that the least possible public discussion of the matter would best suit their interests. The authorities, however, have not been blind and have so perfected regulations that, except upon the payment of an enormous tax, agents can no longer do business. The avowed object of the regulations is to compel all foreigners desiring to do business in this state to appoint local, native business agents, to whom all goods shall be consigned and who alone shall advertise and sell the goods. Incidentally, any foreign house still desirous of sending its own agents must pay heavy tribute for the privilege.

The tax is $426.11 American. Should the value of the paper milreis appreciate the tax will proportionately increase.

EXISTING EVILS.

It must be remembered that prior to the imposition and payment of the tax the unfortunate foreign traveling salesman has had to pass all his goods, samples, and catalogues through the custom-house. This takes a week to ten days. He must pay duties. Then he must pay this exorbitant tax. Then, if he wishes to go to Manaos, in the neighboring State of Amazonas, hemust embark on a vessel flying the Brazilian flag, for should he take one of the handsome, speedy, well-appointed foreign steamers going up the Amazon he must, despite all his custom-house receipts and certificates, have his whole baggage treated at Manaos precisely as if it came from some foreign point. He may, perhaps,

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be able to avoid paying the full duties over again; but something he must pay, and must endure the tremendous delay. When it is remembered that Para and Manaos are probably the most expensive places to live in in the world; that they were so when the milreis was worth but $0.2436, and that with the milreis now costing 50 per cent more, there has not only been no reduction, but an actual increase in the milreis cost of everything, this item of time becomes very important.

I was just informed by a traveling salesman, whose business is such that he needs neither catalogues nor samples, that he must leave the city or an attempt will be made to collect this great tax from him, although he is here merely to look over the field and to see that the regular customers of the manufactory he represents are satisfied. He takes no orders, sells no goods, but he must either pay $426.11 or "get out." He says that he and all other traveling salesmen and representatives would cheerfully pay a license fee of $50 or even $75, but that $426.11 is simply prohibitory. That this is so I am assured by another gentleman who, after paying nearly $350 duties on his samples, was met with this further demand. He determined not to attempt any business here and is going to try to do some business in Manaos, where the tax is much less.

By "foreign" salesmen is meant anyone not a native or resident of Pará, but the net is spread by the words "houses selling by sample," and the special amplification of the taxing law to cover "each and every representative" of any house.

Unless and until these prohibitory regulations are modified and the license tax reduced to a reasonable figure, representatives of American houses seeking to do business with Pará should either refrain entirely from putting in a personal appearance or be prepared for expense on a large scale.

WHALING IN SOUTH ATLANTIC.

NEW METHODS ARE BEING SUCCESSFULLY EMPLOYED.

According to a long report from Consul Furniss, of Bahia, the waters of the South Atlantic are full enough of whales to make an investigation of them, for trade purposes, well worth while. Consul Furniss says the whaling waters run from Bahia to Assu, or from latitude 12½ south to latitude 18 south. The whales caught belong to the Balaenoptera musculus variety—a "whalebone" whale, hence valuable. Quite a large number of those caught will average 360 plates of bone. These bones, however, are short compared with the bones of the "right" whale. They run as long as 38 inches, although the consul says, "The largest I ever saw were 31.8 inches in length and 8.6 inches wide."

The whales attain a length at times of 60 to 70 feet. The consul measured one 51½ feet long and 9½ feet high. Its blubber was 10½ inches thick on back and sides. It yielded 4,121 quarts. The largest whale caught in recent years yielded 5,104½ quarts of blubber oil and 412 quarts of scrap oil. The consul has heard of whales 70 feet long.

THE SEASON.

The season begins as winter approaches the south pole. At that time the whales move northward, and go back in the spring. They reach Bahia by the middle of May and have gone south again by

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November. In July, August, and September the number is so large that the limit of the "take" is determined by the supply of boats. In some parts, off Itapoan and Assu, the season begins about the middle of July and is over by the first of October. No sperm whales are caught and few, if any, ever seen. Nor are "right" whales, so valuable for its bones, ever seen. In twenty years only three were ever known in the parts about Bahia.

HUNTING THE WHALE.

The safest, cheapest, and best method of hunting the whale—the American method—is not applied in the south. The people are far too conservative. In boats, equipment, methods of harpooning, frying the fat, etc., they have much to learn. One owner was induced by Consul Furniss to invest in an American harpoon gun. Experiments are being made with it this year. The consul thinks it will lead to a revolution in the whaling methods of that part of the world. The whole question seems interesting and attractive enough, from a financial standpoint, to justify investigation of the entire field. The crude way in which the hunting is done, the great losses consequent upon the inability of the people to care for the whales when caught, the crude way in which the fat is now fried, boiled, or pressed out, the losses of bones, etc., would more than justify investigation by experts from the fishing sections of the United States. The full report of Consul Furniss is on file in the Bureau of Manufactures, Department of Commerce and Labor, where it may be seen by interested parties.

PERU.

IMPORTATION OF FIREARMS.

Consul-General Gottschalk, of Lima, sends the following report:

A decree was promulgated at Lima September 12 permitting the importation into the Republic of arms, powder, and shot for hunting purposes, of parlor rifles and their charges, and of revolvers of a caliber not to exceed 32, without the formality of obtaining special license from the ministry of war. The times have changed in Peru, and with the stability of the Government during the past ten years many measures dictated during former revolutionary epochs are being repealed. The decree above referred to will prove a boon to immigrant miners, rubber hunters, etc., whose hunting weapons are often really a part of their business equipment.

There has also been removed a local tax of 1 silver sol ($0.487) on the importation of each rifle, shotgun, or revolver through the fluvial port of Iquitos, the headwaters of the Amazon.

EXTERMINATION OF MOSQUITOES.

It has been determined to devote the sum of $516.22 monthly, which sum is to be charged to the general budget for public health, to the work of exterminating house mosquitoes in the port of Callao. This measure is apparently dictated by the fear that yellow fever may sooner or later be introduced from Guayaquil. The work is to be in charge of Dr. Alberto L. Barton.

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CENTRAL AMERICA.

COLOMBIA.

THE COFFEE CROP.

PLANTERS UNABLE TO REALIZE PROFITS—WIDESPREAD DEPRESSION.

Consul-General Snyder, of Bogota, Colombia, reports, on the authority of a native coffee planter, that the annual yield of coffee has largely fallen off, and that on a general average a planter loses on every cargo produced. Figures are given bearing out the statement of loss sustained by planters. Consul Snyder writes:

Colombia in 1897–98 exported 800,000 bags of coffee, which realized an average of $15 per hundredweight, making thus a total of $12,000,000. On an average the plantations producing this amount may be computed as producing at the rate of 1,000 bags per estate, estimating the number of plantations in the whole country at 800. These estates were worth from $40,000 to $50,000 each, thus representing a capital of $32,000,000. Now, however, the export is about 240,000 bags a year, which, computed as above, represents the product of 240 plantations, or a capital of $9,600,000, or a loss to the coffee industry of Colombia of $22,400,000.

This, of course, is the statement of a private party, and statistics are unobtainable wherewith to verify the figures, but the poor state of the coffee industry is well known, and from personal statements made to me and from conditions noted by myself I know that owners of plantations are extremely anxious to get rid of their estates, or lease them for long periods on very liberal terms, and in some cases asking no rent whatever, but leasing them on the sole condition that they be returned at the expiration of the lease in the same condition as when received. It is well known that coffee estates badly situated for export cost more to work now than they produce, and this is not due in any way to a decrease in the price paid for coffee in Europe and the States, but to the enormous increase in the cost of living and the rise in wages, freights, etc., resultant therefrom.

COSTA RICA.

QUARANTINE RESTRICTIONS MODIFIED.

Consul Caldwell, of San Jose, informs the Department of State that the order closing the ports of Costa Rica against ships from ports of the Republic of Panama, issued in August, has been modified. Under the modified order ships proceeding directly from Panama ports will be admitted to Costa Rican ports provided they bring a certificate from the Costa Rica consul at the port of departure to the effect that all cargo has been properly disinfected. Cargo landed in Costa Rica and passengers who disembark will be subject to such further sanitary measures as may be prescribed by the health officers, and passengers will be subject to ten days' quarantine. Ships from San Francisco

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calling at Mexican or Central American ports will be admitted to the port of Puntarenas if provided with a clean bill of health and have no contagious disease on board; but cargo coming directly or indirectly from Panama will not be admitted unless it has been properly disinfected, which fact must be certified by a consul of Costa Rica at a port where disinfection is performed.

PANAMA.

TRADE WITH SAN FRANCISCO.

The building of the isthmian canal has been the cause of increasing and stimulating the import trade of the Republic of Panama, especially with the United States. It appears that San Francisco, through its enterprising merchants, has succeeded in capturing considerable amount of the trade, as the following returns, furnished by Consul-General Lee, of Panama city, for the months of April, May, and June of this year show:

Articles.	Value.	Articles.	Value.
Breadstuffs:		Provisions:	
Flour	$8,015	Meat—	
Other	395	Salted	50
Chemicals and drugs:		Tinned	68
Chemicals	182	Rice	2,820
Drugs	357	Scientific instruments	50
Chocolate	30	Ship fittings	88
Cotton goods	104	Silk goods	291
Fish, preserved	529	Soap	2,688
Fruit, preserved	470	Sugar	577
Hay	36	Textiles, n. e. s.	90
Iron and steel, manufactures of:		Vegetables:	
Bicycles	25	Beans	137
Machinery	250	Onions	419
Typewriters	90	Potatoes	87
All other	238	Other	141
Lumber, dressed	2,932	Wines and liquors:	
Oil	117	Brandy, etc.	801
Paints, etc	149	Wine	6,856
Paper	24	All other articles	15,017
Perfumery	504	Total	44,632

MINING RIGHTS.

Consul-General Lee has furnished also the following copy of a decision of the cabinet council of Panama, interpreting and explaining the act of May 15, covering mining rights in the Republic of Panama. It refers to proceedings of the cabinet council of Panama in the session of July 26, 1905, and says:

A letter was read from the consul-general of the United States requesting a decision in respect to the act of the cabinet council of May 15 (concerning mining rights). The council to-day decided that when the act of May 15 was passed its meaning referred only to national lands upon which in the future rights may be granted, and it is only in this sense that the decision of May 15 should be taken. Future rights to national lands will only be granted upon the condition that the surface alone is granted and that the nation reserves its right to the subsoil. However, in no manner does this interpretation include those lands to which the proprietors hold actual rights, legitimately acquired.

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VENEZUELA.

CONCESSION TO MAKE GLASS.

Under date of August 25, 1905, Mr. William W. Russell, American minister at Caracas, advised the Department of State in relation to a concession for the manufacture of glass and crystal granted by the Government of Venezuela to Carlos Zuloaga. The contract, which was approved by President Castro on August 14, 1905, will remain in force for fifteen years. The principal provisions are as follows:

ARTICLE 1. Carlos Zuloaga binds himself to establish one or more plants for the manufacture of articles of glass and of crystal in the place or places in the territory of the Republic which may be chosen for this purpose. The first plant established must be mounted and in operation within two years subsequent to the date on which this contract is approved by the National Congress, save and except delays caused by the unforeseen and unavoidable circumstances, which must be duly proved to the satisfaction of the Federal Executive.

ART. 2. As an official protection to this industry, entirely new in Venezuela, the Federal Executive makes the following concession to the party of the second part: The exclusive right to operate said industry in the Federal district and in the State or Federal territory where the plant may be established, during the existence of this contract; the right to make use of the prime materials found on the lands of the nation; the right to extract from the territorial sea water the soda and sulphite of soda necessary for the manufacture of glass and crystal in his plant or plants, free from all taxes; the right to import, free of taxes, for one single time for the plant, and for each one of the plants, which the party of the second part may decide to establish, machinery, apparatus, instruments, materials, and utensils designed for the installation and working of his plant or plants; in each importation all legal requisites must be fulfilled; the plant or plants which may be established, as well as the products thereof, are exempt from all taxation or national contribution created or which may be created during the existence of this contract.

FLOUR-MILL CONCESSION.

Mr. Russell also reports that a concession has been granted to José Hilaria Mora for the establishment of flour mills in Venezuela. The concession is to run twenty years, and gives the concessioner the exclusive right to establish in the Republic wheat mills for making flour and bran, exception being made to mills already established. Free imports are granted for all materials necessary for the installation of the mills - machines, empty sacks, building materials, etc.—and on all machines and apparatus which it may be necessary to import in the future. The enterprise will be free from national taxation, and the employees will be relieved from military service, except in case of international war. The concessioner can not transfer these rights to any other person without obtaining the consent of the Government, but in no case can the concession be transferred to foreign governments.

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WEST INDIES.

CUBA.

RAILWAY SUBSIDY.

TEXT OF THE SUBVENTION BILL.

Mr. Jacob Sleeper, chargé d'affaires at Habana, has transmitted to the Department of State copy of a bill which recently passed the Senate providing for the subvention of the Cuba Railroad Company by the Cuban Government by the advance of a credit of $798,450, which is to be paid to the company in installments, and repaid to the Government within ten years after date of payment of the last installment. This bill passed the Senate August 18, 1905, was signed by the President on the 26th of the same month, and promulgated on September 5.

ARTICLE I. Congress authorizes the concession to the Cuba Railroad Company of a credit of $798,450. This sum the executive shall take from the public treasury and deliver to the said company as an advance payment on account of services that the company shall render the country during the enforcement of this law, and with the understanding that the said sum is to be repaid within ten years, reckoned from the date of the last payment from this credit to the company.

ART. II. The said sum, interest free, shall be paid to an authorized representative of the Cuba Railroad Company by means of a public document properly empowering him to represent the company on the one hand and the secretary of the treasury to represent the Government on the other. Expenses and fees entailed in the making out of this document shall be chargeable to the company.

The payment shall be made in three installments, as follows: The first installment, $266,150, shall be paid three days after the publication of this law. The second installment, $266,150, shall be paid on December 15 of the present year. The third installment, $266,150, shall be paid on December 15, 1906.

ART. III. Annually on the last day of each fiscal year an accounting between "The Cuba Railroad Company" and the Cuban Government shall be held, the accounting to be done by a designated functionary of the company, who shall collaborate with the secretary of the treasury and the auditor-general of the Government. The settlement made shall be published in the Gaceta Oficial and shall show the balance remaining each year in favor of the Republic.

ART. IV. The accounting described in the previous article shall be done throughout ten years, reckoned from the date of the last payment to the company. The last accounting shall definitely fix the balance due to the Government and "The Cuba Railroad Company" shall be bound to pay such balance in cash precisely within ten days.

ART. V. The company shall put at the service of and exhibit to the persons who represent the Government books, data, papers, and documents that may be necessary in making the settlement. An uncalled-for delay or refusal to afford data within the time fixed by the representative of the Republic will give these representatives the right

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to ignore such data or documents and to do the accounting themselves, the company being obliged to abide by the result found.

ART. VI. The balance remaining in favor of the Government shall be collected by the special proceeding provided for in law for the collection of interests and taxes.

ART. VII. "The Cuba Railroad Company" may at any time cancel this obligation by paying, after accounting, the resulting balance.

HAITI.

RELATIONS WITH THE UNITED STATES.

COFFEE IN EXCHANGE FOR AMERICAN PRODUCTS.

Mr. J. N. Léger, minister from Haiti, in a statement given the Washington Times, discusses commercial relations with Haiti and the United States, and suggests how trade between the two countries may be largely increased. The minister opens his statement by declaring that because the United States will not buy coffee from Haiti, that country will not buy many articles from the United States which would otherwise be purchased here. The minister is quoted as follows:

All the coffee grown by us is sold to France and Germany. Necessarily what we need and can purchase from them, we get there. Commerce begets commerce. If you buy our coffee we have more money, and we will exchange by purchasing from you whenever and wherever possible.

Coffee is our principal product. And our coffee is of the first quality, not to be compared with many of the cheap qualities which are being sold to-day. Of course, it is more expensive, but, in the end, the American would not object, because he would be sure that he was getting value returned for his money.

We need agricultural machinery, dry goods, and other domestic utilities. Most of those we now get from Europe. As for flour, we get what we use from the United States, but we could possibly use more, because no wheat is grown in Haiti. Another thing we could purchase from you, and which we now get from France, is wine. Your California wines would be preferred by us, because we could get them cheaper, the transportation from that State to Haiti being cheaper than from France.

The general commercial relations between Haiti and the United States are very good, when due allowance is made of the size of the countries. The transportation facilities are excellent, as there are practically three companies maintaining steamship service between the United States and Haiti. Telegraphic communication is also very good, and it would be well to have a few good American drummers sent there, so that the Haitians would be enabled to see the things your country has to offer. Then a number of discriminating travelers should be sent there, men who know the value of things. If they are sent to buy coffee, it is more than likely that they will recognize the superiority of the grain grown by us. With this conviction, they should take steps necessary to have their houses carry it in stock. Not necessarily a bank, but a banking agency, would be welcome by us, since it would facilitate financial exchanges.

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NORTH AMERICA.

DOMINION OF CANADA.

EXTENDING TRADE WITH AUSTRALIA.

TENFOLD INCREASE IN A DECADE—DIRECT STEAMSHIPS WANTED.

Mr. J. S. Larke, Canadian commercial agent at Sydney, New South Wales (now visiting Halifax), makes the following report concerning Canadian trade with Australasia and the means being taken for its enlargement. In transmitting this report, Consul-General Holloway invites the attention of American manufacturers, exporters, and importers to the many ways whereby the Canadians are trying to increase their trade with Australia, and suggests that if our people would show as much special and general activity in the premises American trade with those far-off colonies would be very much larger than it is. The manner in which the Canadian steamship lines cooperate with the Canadian manufacturers is worthy of special commendation. It would be impossible for an American consul in Australasia to point out the best means for increasing trade with those colonies more forcibly than is pointed out to Canadian exporters in this report; indeed, it only corroborates what United States consular officers have repeatedly said in this regard. Mr. Larke said:

The steamer on which I came was filled to her capacity, and more passengers offered than could be taken. This has been the case for some time. The Canadian Pacific offers tourist tickets from Sydney and Banff to return, but it is noteworthy that every Australian who started upon those excursion tickets resolved to extend their trip.

The maritime provinces have not yet seen many of these visitors. One of my efforts has been to induce Australasian business men to go to England or return from England by the way of Canada, and they are doing so in increasing numbers. One Montreal house told me that 10 Australasians had visited them with a view to business in a single fortnight, and a Toronto firm said it had had 14 in that time.

REMARKABLE INCREASE.

In a little over a decade the export trade of Canada to Australia has increased tenfold, according to our returns. The Australian returns do not show as large an amount of imports from Canada as our returns show exports to Australia. The reason of this is that a good deal of the trade is now done through London and New York. And even our own returns do not show the correct volume of business, because goods sent to London and New York for transshipment are shown as goods shipped to the United States and England. The trade, when I went to Australia, was confined almost wholly to lumber and canned salmon from British Columbia, but these are now but items of the trade.

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The bulk of our exports consists of manufactures from eastern Canada. One of the purposes which I have in coming to Halifax is to interest eastern people in the importance of having steamers run between Australia and eastern Canada. The transportation often determines trade. It is a question with the Australian importer as to what the goods will cost him landed at his wharf. Hence a high rate of freight will neutralize goods made at a proper price. It is impossible for eastern goods to stand the long overland haul and mail-steamer charges via Vancouver. This route is doing all that it possibly can to encourage trade by quoting low rates of freight, and yet it carries less than a third of the trade done.

VOLUME OF CANADA'S TRADE.

Canada's trade with Australia is now of sufficient volume to warrant an enterprising shipowner in catering for it. There are items that could be exported from the maritime provinces and Quebec which ought to give full cargoes for each monthly vessel, even when there might be irregularities in the amount of manufactures offering as cargo. There are also better opportunities for a return cargo from Australia than there are from South Africa.

Foreign trade is not always looked upon as a profitable trade by the Canadian manufacturer. He frequently seeks it in order to keep his factory running and his organization intact during the dull season. He may get only a new dollar for an old one. But the workingmen who are thus kept employed are paid the current rate of wages, and they in turn are enabled to pay full prices to the farmer and the shopkeeper for the supplies they are thus able to buy. As a matter of fact the manufacturer is thus the best exporter of farmers' produce that the country possesses. He is able to send products to countries which would not receive them in their ordinary shape. About 60 per cent of the value of manufactures sent abroad finds its way directly into the pockets of the Canadian farmer. He is thus vitally interested in the extension of our export trade when it can be done upon reasonable terms.

The Province of Nova Scotia should be deeply interested in this trade. With the development of the iron and steel production, leading up to the restoration of its old industry of shipbuilding at no late date, the possession of the chief raw materials of manufacture and facilities for export ought to make this Province a great seat for manufacturing for foreign markets. And every step tending to give facilities for this trade will be for the direct encouragement of building up manufacturing industries of Nova Scotia. As yet but few of them have made any effort to export, but the few that have been able to see are manifesting a desire to undertake it, and I hope at no distant date to welcome a number of representatives of those institutions to Australia.

From the United States there are four lines of steamers going directly to Australia, besides tramp sailing vessels and one or two lines which transfer cargo at Marseille and Genoa. It would seem but reasonable, therefore, in the face of this fact, that a line of ships sailing from Montreal in the summer and from a winter port of the maritime provinces during the season when the navigation of the St. Lawrence is closed would have as good prospects for remunerative

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cargo as a line from New York. With a line of steamers thus sailing and touching at Halifax, manufacturers of Nova Scotia would have facilities for sharing in the trade of the east, which they do not now possess.

THE FISHING INDUSTRY.

EXPERIMENTS TO FACILITATE CATCHING AND CURING.

Consul Ifft, of Chatham, Ontario, sends a report on certain improvements instituted and experiments made in the Canadian fishing industry. Motor boats are coming into use and new methods of steam drying are being employed with great success. An effort is being made to transplant the oyster and lobster to the Pacific coast. Native Scotchmen are introducing the latest methods in herring packing. He reports:

An article in the Toronto Globe gives details of recent experiments for increasing the value of Canadian fisheries, and which the writer thinks will add several millions annually to an industry that is now worth $23,000,000 per year. My attention was called to the article through recent shipments of a coarse carp from this port to New York City, a fish here regarded as unfit for food but which is invoiced in carload consignments to the New York markets at 3 cents per pound. The writer of the Globe article also refers to the growing use of motor boats by the maritime province fishermen, who are thus no longer dependent upon the winds to fill their sails. These motor boats not only enable the fishermen to reach the fishing grounds at all times and with the quickest speed, but they serve also as small freighters.

The experiment being made by the government with the Scotch steamer *Thirty-three* is proving fairly successful. This craft was brought out from Scotland last year to develop the steam-drifting business along the Atlantic coast. A Scotch expert also came out on invitation of the government, to introduce into Canada the methods of curing and packing so long successful in Scotland. During June the *Thirty-three* made catches as high as 100 barrels of herring a day.

IMPROVED DRYING PROCESS.

Quite as modern as the motor boat and steam trawler is the improved process for drying fish. An elevator takes the place of the handbarrow, and a steam-heated drying room instead of the uncertain temperature of outdoor racks and frames. By the new method fish may be prepared and dried to different degrees, as required by different markets, and independent of the weather. An equipment of this kind, with hydraulic presses for packing the fish, has been installed in a new Halifax warehouse, which is said to be the largest dry-fish packing house in the world. It has 45,000 square feet of floor space.

On the Pacific coast an effort is being made to acclimatize the lobster and oyster. These shellfish are not native to the Pacific waters, but it is believed that they can be successfully introduced. Thirty cases of Nova Scotia lobsters and Prince Edward Island oysters were sent west in June, packed in damp seaweed and iced. Previous experiments in transplanting lobsters to the coast have failed, owing to the length of the trip, and the impossibility of keeping a salt-water

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tank supply; but these latest hard-shell colonists were sent on ice and in special refrigerating cases built for the purpose. They arrived in fairly good condition.

INSTRUCTIONS IN HERRING PACKING.

The Pacific coast fisheries are also being experimented with in three other directions. Only recently traps have been allowed in the salmon fisheries on the coast, and the first cannery built as a result of this new system was opened a few weeks ago at Esquimalt. A part of the product will go to Germany. British Columbia's herring fisheries are also important, and arrangements have recently been made for a party of Scotch fishermen and packers to visit the coast in the coming fall and give the fishermen a course of instruction in modern herring methods. A third fish of merchantable value, but a few years ago supposed to be worthless as food, is the dog salmon. Some 30,000 tons of this fish will probably be shipped this year to foreign countries. Dry salted, it is worth $32 a ton in Vancouver. Less of a commercial asset, and more of a nuisance, but still of some value, is the dogfish. It is particularly the scourge of the eastern coast, where it creates annual havoc with the cod and herring fisheries. But the dogfish is soon to be turned to profit. At Canso, Nova Scotia, reduction works are now manufacturing it into oil and fertilizer.

OFFICIAL NEGLECT.

In connection with the foregoing, Consul-General Holloway writes:

Canadian fishing interests have been more or less neglected. Whitefish and salmon trout in Canadian waters are almost extinct. In the fresh waters, where they are not yet extinct, the German carp, imported years ago, and breeding about fifteen times as fast as whitefish, are destroying the remainder.

The situation in the big and small lakes is so serious that Dominion fish experts see no choice between three years of close season and seven years of luxury in whitefish and salmon trout and after that a steady diet of carp.

Although the fresh-water fish are being systematically destroyed, the Nova Scotia fisheries were never better. Last year $8,000,000 worth of fish was exported, while another $1,000,000 worth was sent to different places in Canada.

Improvements will be made under government inspection, so that in future the salmon, halibut, mackerel, and haddock, taken in such enormous quantities, will be delivered fresh in Toronto, Montreal, and New York.

SALMON IN BRITISH COLUMBIA.

A CLOSED SEASON NEEDED FOR PROTECTION.—OFFICIAL INSPECTION.

Consul Dudley, of Vancouver, reports about this year's run of fish in British Columbian waters, particularly the run of salmon. He writes:

The fishing for salmon in this Province was suspended by the Dominion government from August 25 to September 15. The purpose of this close season was to allow the last run of the sockeye salmon to reach the spawning ground. The value of the season's pack will be fully $6,000,000.

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September 15 the canners began packing the cohoe and humpback salmon, and a large run is expected.

Fishery experts here and upon Puget Sound seem agreed that to conserve the industry a close season of at least two years is necessary. The Dominion government last winter passed an order in council providing for a close season in the salmon fishing for the years 1906 and 1908, with the expectation that the State of Washington would forbid fishing in its waters for the same two years. But the legislature of the State of Washington failed to enact the law, and as it will not assemble again until 1907 the desired cooperation in preserving the industry in this manner can not be secured.

OFFICIAL INQUIRY.

Doctor Prince, who is at the head of the Dominion fisheries commission, is now on his way to this coast. I am informed that there will be hearings held both here and in Victoria, and it is hoped that the fish commissioner and other interested persons from the State of Washington will be present.

Mr. Babcock, fish commissioner for British Columbia, reports favorable conditions. He says that "fully 200,000 strong, healthy sockeye salmon passed through our weirs at Seton Lake. Over half of these were permitted to enter Seton and Anderson lakes, where they will spawn naturally. The rest are being retained, and when ripe the ova will be taken and placed in the hatchery at Seton Lake."

Mr. Babcock went to the Quesnel district to inspect the dam and to watch the work going on in the spawning beds. At one point he saw 900 sockeye salmon pass a selected point in the rapids in one hour, and he counted only those ascending on one side of the river. He found the fish were compelled to come through the fishway on the Quesnel dam. The run this year is said to be as big as that of the best year in the times before the dam was built. The fish ladder designed by Mr. Babcock works well, the fish finding no trouble in locating it and passing through.

Everything seems to be working satisfactorily. The run some days seemed absolutely limitless. One old fisherman talked of a river red with fish. There was no way of counting them. This is literally true, for it has been confirmed by the observations of others, disinterested parties. Over the spawning fields the new control has led to legitimately expected results, abundance of fish, and no terrible losses like those recorded in the past.

VALUE OF INSPECTION.

Speaking of furnishing protection for the fish by governmental supervision, Mr. Babcock said:

I look upon the annual inspection of the spawning grounds as of first importance. Naturally all eyes are directed to the fishing grounds. There is where the money is made, so we are always well informed of the conditions there. Heretofore not enough attention has been paid to the spawning grounds, yet there is where the runs of future years come from, and where estimates must be made. The salmon crop report of acreage planted must come from there. It is not the pack that tells the story of future runs; it is the ground

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planted. The fishermen and canners will exploit the fishing grounds every season, have no fears on that score; but to the government is left the duty of watching the spawning grounds, and it has been my pleasure to represent the government there.

IMPRESSIVE OBJECT LESSON.

I do not assert that the number of fish on the spawning grounds this year equals that of four years ago, for I do not believe it. But I do say that, even if there are less, the fact that the hundreds of thousand of sockeye which this year worked their way up the 500 miles of the Fraser to the Quesnel had access to that great spawning ground, and, successfully seeded, that, the greatest lake district of the Fraser, will go a long way toward equalizing any falling off there may be in other sections. The old Quesnel dam cut off that section in 1901. The spawn deposited in the Quesnel Lake section this year will, I think, equal that placed in the hatcheries on the Fraser, notwithstanding that all the hatcheries this year will be filled to their capacity.

A contrast of the abundantly seeded spawning grounds this season with the unsown, unproductive beds of the past three years should be an impressive object lesson to the fishermen, the canners, and the general public. It is all so simple that he who runs may read; the runs of the future, the perpetuation of the salmon, depends upon the fish which reach the spawning grounds each year. We can not, as we have been doing, catch all the fish in the poor years, thereby leaving the spawning beds unoccupied in those years, and yet maintain the runs. We can cut off all our timber, we can exhaust our mines, but if we intelligently conserve our fisheries—protect and propagate them—they will in time be our greatest producers.

WHALING.

NEW ENTERPRISE IN THE NORTH PACIFIC.

Consul Smith, of Victoria, British Columbia, reports the establishment of a new whaling company on Vancouver Island, and says it is meeting with such success as has led others to investigate the field. He writes:

One of the most important industries tributary to Victoria that has been established recently is the Pacific Whaling Company. It has built a fully equipped station at Sechart, Barkley Sound, Vancouver Island, and this season secured from Christiania, Norway, an up-to-date whaling vessel. The company was organized in Victoria last spring with a capital of $100,000. It erected at Sechart two buildings, one 50 by 50, the other 48 by 40, both two-story frame structures, each having big vats equipped with all modern conveniences for reducing whale carcasses to merchantable commodities. It employs nearly a hundred men. A new steam whaler was constructed in Norway specially for this company and is thoroughly fitted to hunt whales. As the first whaler owned in Victoria it attracted considerable attention. It registers 108 tons, is built of steel, 96 feet long by 11.6 feet beam. A small cannon on board is used for shooting the harpoon. Attached thereto is a grenade which explodes as the harpoon strikes a mark and kills the whale. Should the whale be not killed with the first

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onslaught, it is at least held by a very strong Russian hemp line 2,400 feet long and 5 inches thick. As soon as a harpoon enters the whale the windlass aboard the vessel is at once set in motion, and the whale is drawn in closer to the steamer until such time as another harpoon is fired and it has been killed outright.

An unsuccessful effort was made to get the vessel in free of duty. The company paid the customs, $4,988.50, or about 25 per cent on value of vessel, machinery, and appurtenances.

SULPHUR BOTTOMS CAPTURED.

In less than a week after leaving port two large sulphur-bottom whales were captured, each weighing over a hundred tons. Inasmuch as whalers figure each sulphur-bottom whale (the most numerous species of whale in these waters) at $700, the net cost of handling being about $200, it is felt that a most important addition to the fishing industry of Vancouver Island has been inaugurated, as there is no doubt that large numbers of whales can readily be secured in this vicinity. The success of this whaling enterprise has attracted great attention along the coast, and it is stated that an American company has already applied for rights on the coast of Alaska, and still another on the Oregon coast. The entire west coast of Vancouver Island comes within the domain of the Pacific Whaling Company, of Victoria. It is reported that steps are being taken to incorporate another whaling company to operate in Queen Charlotte Sound and in the Gulf of Georgia, and that a whaling steamer therefor has already been ordered from Norway.

CHEESE TRADE.

CANADA AND THE UNITED STATES COMPETITORS.

Consul-General Holloway, of Halifax, sends the following extract from the Maritime Merchant relative to the cheese trade of Canada:

About twenty to twenty-five years ago the United States was the principal foreign contributor to the cheese supply of Great Britain, but to-day Canada has taken the lead and outstripped the United States as an exporter of cheese. The following table compiled by the Trade Bulletin shows the imports of cheese into the United Kingdom from the principal exporting countries for the first six months of 1904 and 1905:

Country.	1904.	1905.
	Pounds.	*Pounds.*
Canada	54,882,912	48,790,560
United States	16,669,296	12,514,544
Australasia	8,787,408	8,356,482
Miscellaneous	18,802,560	16,898,896
Total	99,142,176	86,569,432

The above shows a falling off from all foreign sources of 12,481,744 pounds, or about 20 per cent. This no doubt has been one of the reasons for the recent sharp advance in the price of cheese on this side of the Atlantic.

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CAUSES FOR THE CHANGE.

An examination of the foregoing statement by the Bureau of Manufactures shows there is no sequential reason why a falling off in the imports of cheese into the United Kingdom in 1905 should cause a "sharp advance" in the price of cheese on this side of the Atlantic. On the contrary, it should cause a decrease in price, unless the falling off was due to a decrease in the Canadian output.

As the Maritime Merchant claims, Canadian and American cheese have literally changed places in the British market during the last twenty years, as will be seen from the following statement, copied from British official publications, showing imports of cheese into the United Kingdom from Canada and the United States in 1880 and in 1904:

From—	1880.		1904.		Price per pound.	
	Quantity.	Value.	Quantity.	Value.	1880.	1904.
	Pounds.		*Pounds.*		*Cents.*	*Cents.*
Canada	31,537,632	$3,729,486	212,862,322	$20,609,627	11.83	9.68
United States	131,208,776	16,602,673	25,180,960	2,449,368	12.65	9.73
All other countries	36,165,256	4,445,694	48,037,982	5,380,831	12.29	11.20
Total	198,911,664	24,777,853	286,081,264	28,439,826	12.45	9.94

CAUSES FOR THE DECREASE.

Before entering into the causes for the decrease in the exports of American cheese to the United Kingdom, and the counter increase in the imports from Canada, it is worth while to draw attention to the fact that the British consumers were able to purchase foreign cheese at 2½ cents per pound less in 1904 than in 1880, a fact, in this instance, which contradicts the opinion that the cost of living had greatly increased in the twenty years under consideration.

The imports of cheese into the United Kingdom in 1904 show that the price of American cheese is a shade higher than the price of Canadian. This is a pointer going to show that the decreased exports of American cheese to the United Kingdom was not caused by Canadian competition, but was solely due to the fact that the consumption here has so outgrown production, great as the latter is, that the United States has no plethora of the product for export, while Canadian production has so outgrown home consumption that it is forced to seek the British markets for its plethora, and to fill up the place left vacant in that market by the withdrawal of the United States therefrom.

PRODUCTION AND EXPORT.

In 1900, the latest year for which official returns are available, the production of cheese in the United States—in cheese factories, not including farm production—amounted to 281,972,324 pounds. The population of the United States in that year was 76,303,387. This gives a per capita factory production of 3.7 pounds.

In 1901, the exports of cheese—no returns at hand as to the production from Canada amounted to 224,352,128 pounds. The population of Canada in 1901 was 5,371,315. This gives a per capita, for exports alone, of nearly 41.8 pounds.

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When, therefore, our Canadian friends point with pride to their very large cheese trade in the United Kingdom, as well they may, they should not attempt to create the impression that it has been gained at the expense of the United States. They must export their cheese, or get "snowed under;" we can not keep up in production with our increasing home consumption.

The increase alone in our population since 1900, the date of the last census, is nearly, if not altogether, double the total population of Canada, and it seems almost impossible to expect that our cheese production can keep up with our home consumption. Not only must our cheese exports continue to decrease, for the reason given, but our cheese imports are annually increasing to meet new demands, the imports in 1904 amounting to 22,707,000 pounds, being double our imports in 1899, and nearly equaling our total exports to the United Kingdom in 1904.

PUBLIC OWNERSHIP.

SUCCESSFUL RESULTS OF OPERATIONS AT GUELPH.

Consul Van Sant, of Guelph, Canada, says that public ownership of certain utilities in Guelph are meeting with fair success. He reports:

In matters of municipal ownership this city leads and, more than any other city in Canada, perhaps, is being cited as an example. Guelph owns and controls all its important public utilities, some of which have not reached that degree of development which would lead the impartial observer to pronounce in their favor, while others show the wisdom of public ownership in a city of 12,000 to 15,000 inhabitants, where carefully initiated and sustained by strict business and nonpartisan conditions they are working successfully. Twenty years ago Guelph invested $173,000 in the Guelph Junction Steam Railway. The enterprise is now a profitable asset, each quarter showing increased net earnings, the last quarter's net profits amounting to $3,840. The annual receipts amount to $16,000.

The light and power committee has submitted the annual report, showing a net profit for the past two years aggregating $26,172. This includes the gas and electric power supplied the city within the city limits. Gas is quoted at $1.40 per 1,000 meters. This result has only been obtained by strict adherence to business methods. It includes all legitimate expenditure, as well as charges on $155,000 worth of debentures of the city, and an adequate amount set aside for depreciation in plant.

STREET RAILWAY AND GAS.

The street railway company shows assets of $92,157, and liabilities of $84,112 and an overdraft of $8,044, representing cost of new cars and rails. The railway was originally built by private enterprise at a cost of about $150,000. The receipts for the nine months ending June 30 were $25,435; the net profits $465. The summer months will more than double this profit. The total receipts show increase for corresponding period of previous year of $2,830, or 23 per cent, this being the first year the road has ever been run without a loss. The line covers some 8 miles of trolley. The fare, 5 cents, is reduced to 3 cents when $1 worth of tickets are purchased.

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The waterworks, with assets of $151,102, show receipts of $16,553; cost of maintenance, $9,397, less credits. The sewer represents a recent outlay of $87,143, and the receipts for the past year amount to $15,732, based on charges per front foot.

The business in all departments is growing and the demand for supplies increasing. While large orders could not be expected yearly, there should be a market for large pipe and sewerage appurtenances; also for extra street cars and rails to be purchased the coming winter. The people of Guelph earnestly cooperate to sustain the system of public utilities and are meeting with a fair degree of success; but as the city grows a tendency is observed toward increasing strife for supremacy in civic affairs.

THE LUMBER INDUSTRY.

VAST ACREAGE OF THE NORTHWEST.

Consul Smith, of Victoria, reports upon the great lumbering interests of British Columbia, giving estimates of the quantities cut and the forest acreage. The facts furnished suggest a field for American forest and sawmill machinery. He writes:

Next to the extensive mineral lands of this Province, the most important of British Columbia's natural resources is her immense timber reserve, which, although curtailed somewhat by the great forest fires that have raged in the interior during hot and dry summers, is still vast in extent. An official estimate places the acreage of timber in British Columbia at the present time at 182,750,000 acres. As the great timber belts of the continent are being gradually taken up, the attention of lumbermen has of late been drawn particularly toward this Province, and especially during the past two years, when vast tracts have been acquired by American syndicates, which are rapidly becoming the largest holders of timber lands in Vancouver Island and also on the mainland of British Columbia.

A valuable circular in regard to the timber cut of the Province has just been issued by the department of lands and works, which gives the following results: To 1871, 250,000,000 feet; from 1871 to 1888, 595,000,000 feet; from 1888 to 1904, inclusive, 2,569,759,262 feet, or, in the aggregate, 3,414,759,262 feet, besides that cut from private and Dominion government lands.

DECREASE IN SHIPMENTS.

The lumber cut of 1904 in this province, according to the report of the department of lands and works, aggregated 325,271,568 feet, cut off 703,433 acres under lease from the provincial government; and in addition to this there was cut on Dominion lands 22,760,222 feet, making a total of 348,031,790 feet.

The cargo shipments from British Columbia to foreign ports were in 1903 as follows: Lumber, 52,263,105; lath, 1,676,270. In 1904 the shipments fell off in consequence of strong American competition, and was as follows: Lumber, 38,220,148; lath, 1,306,569. This falling off in the shipments of lumber is claimed, as stated, to be due to American

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competition, and strenuous efforts have been made to induce the Dominion government to put a duty of $2 per thousand on rough lumber imported from the United States, but so far without success, and no hopes are now entertained by the lumber dealers that such import duty will be exacted.

DRASTIC REGULATIONS.

The provincial government's revenue from timber for the year ended June 30, 1905, was $150,000 more than estimated, exceeding $400,000; this notwithstanding nearly three-fifths of the revenue accrued from licenses to cut timber upon lands owned by the Crown. Recently the provincial government has become more drastic in its regulations, and has issued a stringent order prohibiting the export of logs cut by hand loggers from Crown lands in the province. The penalty imposed by the order is that all logs attempted to be exported under such conditions are to be seized. There are now about 400 hand loggers along the coast, men who take out licenses at $10 each and who have carried on work on sidehills near the water, so that their logs may be marketed without the use of expensive logging outfits. Heretofore one man has had as many licenses as he wished. In this way well-to-do loggers have carried on an extensive business. One lumberman in Vancouver had no less than sixty licenses, from which he made exports to the United States. This order has created a great deal of opposition, and lumbermen are proposing to take it to the courts.

It is estimated that the total capital invested in lumbering is $4,250,000, represented by mills, logging plants, logging railways, tug boats, etc., exclusive of the value of lands purchased and leased as timber limits, which would total near $1,500,000 additional. There are 100 sawmills in the province, big and small, with an annual cut running between 300,000,000 and 350,000,000 feet. The acreage of timber under lease is about 2,000 square miles, and the total area of forest and woodland is estimated by the Dominion statistician at 285,554 square miles, or 182,754,560 acres, but much of it is covered with small trees, only fit for fuel and local lumber, which would not be considered as "timber" by the loggers.

WANTS OF NEW COMMUNITIES.

OPPORTUNITIES FOR AMERICAN MANUFACTURERS.

According to Consul Dudley, Vancouver and the country around it is offering fairly good opportunities to American manufacturers of articles needed in newly developing communities. It might pay an agent or two, representing houses whose products are kindred in character, to cover the entire field. Consul Dudley's report follows:

During the past three years a new town has grown across Burrard Inlet, about 2 miles from this city. Three years ago but little development work had been done, and the other side of the inlet had the Indian mission village and little else. The water front of North Vancouver is quite as extensive as that of this city. Almost the entire water front upon this side is now occupied, chiefly by the Canadian

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Pacific Railway and its steamship lines. North Vancouver, it is estimated, has a population of about 3,000, exclusive of the Indians. Streets have been laid out and graded, large quantities of land have been cleared and sold in lots, and many stores and dwelling houses have been erected. Several manufacturing plants have been established. Excellent water supply has been provided by the municipality. The water is brought from Lynn Creek in wire-wound wooden pipes, a distance of about 5 miles. The water comes from the snow-capped mountains and is of almost absolute purity, and the valley of the creek is so narrow that there will never be much opportunity for polluting the water supply.

Two wharves have already been erected and others will soon be built. A contract has been made with the British Columbia Electric Company to install an electric street railway, about 1½ miles of which up the main street is to be installed and in working order by the 1st of next June. Another contract has been made with the same company to install an electric lighting plant, which is expected to be in working shape by the 1st of January next. The power to operate the street railway and the lighting plant will be supplied from the company's works at Lake Beautiful, the current being brought across the north arm of the inlet upon an aerial cable.

The Vancouver, Westminster and Yukon Railway has surveyed a location for an extension of its line northward. This road is expected to cross Burrard Inlet upon a bridge at the second narrows, about 2 miles east of this city. It is expected that this line will be projected northward until it connects with the Grand Trunk Pacific at or near Fort McLean, in the northern portion of the Province.

AMERICAN SHOES.

MANY WORN, BUT NONE ON SALE IN LOCAL STORES.

Consul Martin, of Amherstburg, Ontario, writes that the people in his consular district recognize the superiority of American-made shoes, and that many thousand pairs are annually purchased in Detroit, Mich. Notwithstanding the popularity of American shoes, the consul reports that he does not know of a dealer in his district who handles American-made shoes. Believing that American manufacturers might induce dealers to handle American-made shoes, Consul Martin furnishes the following list of shoe dealers:

E. Bernbe, J. I. Cousins, and F. P. Scratch & Co., Amherstburg; O. H. Bricker, J. A. Francis, W. Chatterton, and R. Sonley, Essex; O. E. Scratch and P. Hendershott, Kingsville; T. B. Adams, Harrow; R. O. Y. Ainslie, Comber; J. S. Richardson, Tillbury; Whitney Brothers, Wheatley; A. B. Wright, Leamington.

Vice-Consul McMillan, of Winnipeg, also writes that American shoes are popular in that consular district, and that if they could be sold as cheaply as the Canadian article they would command a market. The superiority of American over Canadian made shoes is universally acknowledged. Mr. McMillan furnishes the following list of shoe dealers in Winnipeg:

Ames Holden Company, Arthur Congdon, Calloway & Co., Kilgour Rimer Company (Limited), H. G. Middleton & Co., Thomas Ryan & Co. (Limited), and Winnipeg Commission Company.

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TRADE WITH DETROIT.

Consul Ifft, of Chatham, in reply to a request for information regarding American shoes in his district, says practically none are sold in Chatham; but it is matter of general comment that most of the shoes worn in the city are of American make. The people in those parts make excursions to the United States and go back with shoes bought on this side. The report, which is in the form of a reply to a shoe house, follows:

GENTLEMEN: Replying to your letter, I have the honor to submit the following list of shoe dealers in Chatham: Trudell & Toby, George Cowan, William Somerville & Son, Alex. Hall, J. L. Campbell, Albert Side, and D. Turrell.

Practically no American-made shoes are on sale in Chatham. It is, however, a matter of general comment that 90 per cent of the better grades of shoes, especially women's shoes, worn by the people of Chatham are of American make. It is common to hear the expression: "You can't buy a good shoe of Canadian make; they don't make them." It is generally admitted that shoes of Canadian manufacture are not equal to the American shoe, either in elegance of cut or in perfection of finish. This is especially true of the higher grades. The result is that the people here go to Detroit to buy their shoes, and by wearing the new shoes home escape the payment of duty. Weekly excursions over all railroads from this place to Detroit, at less than one fare for the round trip, encourage this trade between Chatham and Detroit. What is true of Chatham in this particular is probably true of every Canadian city within easy reach of the American border cities in this section.

PROPAGATION OF LOBSTERS.

Consul-General Holloway, of Halifax, reports that an Ottawa special says that one of the experts of the Canadian fisheries department has returned from British Columbia, after successfully planting, at different points in the waters of that Province, a large number of good-sized lobsters. Attempts have been made by the fisheries department in other years to transfer lobsters from the waters of the Atlantic to the Pacific, but without success, the long railway journey being too much for the crustaceans. Profiting by the experience gained in the past, extra precautions were taken this year, with the results that of the original consignment of several thousand lobsters shipped from the maritime provinces, 40 per cent reached Vancouver in good condition, and were speedily transferred to the sea at various points both on the mainland coast and Vancouver Island, upon which a strict closed season will be observed for two or three years.

INCREASED POSTAGE ON TRADE PAPERS.

For over twenty years there has been a gross abuse of the Canadian mails by numerous publishers of publications in the United States, which they have succeeded during the whole of this period in having had classed as legitimate newspapers and periodicals, and therefore entitled, under the convention between that country and Canada, to

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transmission through the Canadian mails at the minimum rate of postage, being the ordinary rate accorded to legitimate newspapers and periodicals. The subject has for many months been engaging the attention of Sir William Mulock, the postmaster-general, and the officials of the post-office department, and as a result it has been decided that this class of publication is not entitled to transmission through our mails at ordinary newspaper rates, but that postage on each periodical must be prepaid at the rate of 1 cent for each 2 ounces. The practical effect of this decision is to exclude this class of publication, numbering thirty-eight, from the Canadian mails.

TRADE OF CANADA.

The following table, prepared by the Bureau of Manufactures, shows the trade of Canada with the several countries in 1905, and the increases and decreases as compared with the preceding year:

Country.	Total imports.	Total exports.	Increase(+)or decrease(−)	
			In imports.	In exports.
United Kingdom	$60,538,811	$101,958,771	−$1,231,568	−$5,632,605
British possessions	13,123,479	11,918,077	− 113,121	+ 630,000
Total	73,662,290	113,876,848	− 1,435,219	−15,002,605
United States	166,040,890	75,563,015	+15,214,375	+ 2,388,466
Germany	6,642,139	1,146,654	− 1,386,405	− 672,569
All other countries	20,489,152	12,730,355	+ 2,821,624	+ 3,082,345
Total	266,834,471	203,316,872	+15,377,234	−10,204,363

AMERICAN-CANADIAN TUNNEL.

Consul Conant, of Windsor, Ontario, writes about a proposed tunnel under the Detroit River between Windsor, Ontario, and Detroit, Mich. It is to be about 7,400 feet long, but from the points on both sides where the gradations downward begin, about 2¼ miles. As the United States Government requires a depth of 40 feet in the channel over the tunnel, the top of the latter will not come higher than 45 feet under the surface, thus allowing for 5 feet of gravel on its crest.

The methods of construction are to be the most modern in tunnel building, both in excavating and constructing the tunnel itself. The safety of the workmen will be looked after from the day the first shovelful of dirt is dug down to the day on which the first train passes over the tunnel rails or the first foot passenger passes from one side to the other.

ACCORDING to the report of the Dominion superintendent of insurance, recently issued, the amount of policies held by Canadians in American companies is $180,631,866. During the year 1904 $36,145,211 of life insurance was effected by American companies in that country and their premium income from Canadian policy holders was $6,536,710 for the twelve months. There are 92,472 Canadians insured in American life-insurance companies. Since 1875 Canadians have paid as premiums to American companies the sum of $85,592,495.

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MEXICO.

RAILROAD ENTERPRISES.

TO CONNECT THE INTERIOR WITH THE SEA.

Consul Louis Kaiser, of Mazatlan, calls the attention of American manufacturers to new railroad enterprises in Mexico. Active efforts are being made to unite distant interior parts of the country with the seaports. Railroads are being built by private capital backed by Governmental concessions and aid. Rich mining and agricultural regions are being opened up. It might be worth the while of American firms supplying railroad and mining material to send agents to Mexico for the purpose of securing expert evidence of just what has been done and is being done. The consul writes:

Active work is to begin at once on a railroad line from Guaymas to Guadalajara which will be of great importance to the commercial interests of America, to engineers, contractors, exporters, and manufacturers of railroad supplies. It will bring the west coast of Mexico into close relations with the United States.

Mr. A. J. Naugle, superintendent of the Sonora Railroad Company, at Guaymas, Mexico, is at the present time in full control of the work and will be able to give all needed information.

No definite route for the road has been selected, but this much is settled, that the line will touch Alamos, will cross the line of the Kansas City, Mexico and Orient Railroad at Fuerte, and then run along the coast to Culiacan and to Mazatlan. From Mazatlan the road will go to Tepic, in the territory of Tepic, and thence to Guadalajara.

A subvention of $12,500 per kilometer (0.62137 of a mile) has been granted by the Mexican Government. The length of the road will be about 1,250 kilometers. The estimated cost of the road is $30,000,000. It must be completed within seven years from the date of the signing of the contract. The attorney for the road in the City of Mexico is Rosendo Pineda, but I do not know that he is its official representative.

This road will open a very rich mining and agricultural country. Lack of railroad transportation facilities has done more to retard the progress of this country than anything else.

OPPORTUNITIES IN SINALOA.

Sinaloa, to the north of Tepic, presents a remarkable variety of soil and climate. The valleys contain rich alluvial soils, and the foothills and mountains a sandy loam very productive when watered.

One crop at least can be raised anywhere within the State, but by irrigating two and often three crops a year can be raised. The rainfall, averaging the same for twenty years, is about 30 inches, making Sinaloa one of the best-watered States in the Republic of Mexico. Besides it has the Fuerte, Sinaloa, Mocorito, Culiacan, San Lorenzo, Elota, Piaxtla, Quelite, Mazatlan, and Chametla rivers. Irrigation is, comparatively speaking, very easy and cheap.

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It is the custom of the small farmers (rancheros) throughout the various districts to throw up small embankments to hold the waters. This is accomplished with very little expense or loss of time. It enables them to store large quantities of water to be used during the dry season for irrigation purposes and for watering stock.

The Federal Government of Mexico, as well as the State government of Sinaloa, are very favorably disposed toward all plans leading to irrigation, or rather gathering water in large reservoirs, to be used during the dry season for irrigation purposes; and when this will have been accomplished in a systematic manner, with the cooperation of the governments, this country will be the "garden spot" of the Republic and will compare favorably with California, which it resembles a great deal.

WARNING.

HINTS FOR AMERICAN MANUFACTURERS.

Consul Kaiser, of Mazatlan, Mexico, warns the makers of iron pipes, steel rails, etc., against their foreign competitors. He cites a case where Americans might have had heavy contracts for iron water pipes and steel rails but for the fact that they were outbid in both cases. The consul says:

Some time ago I tried to secure a heavy contract for large-sized water pipes for the use of the water company of this city for the manufacturers of the United States, but although the company would rather have given the contract to the United States, the order went to Germany, not alone at a lower price but on a much lower freight rate.

In addition to the loss of the water-pipe contract, I desire to call the attention of our iron factors to the fact that a contract for 50,000 tons of rails has also been placed in Germany, a contract which our founders could and should have secured had they cared to do so.

This contract has been let for rails for the line to be built between Guaymas and Guadalajara by the Southern Pacific Railway Company. The contractors, Henry Lund & Co., of San Francisco, are now engaged in loading three ships at Krupp storage warehouses. One ship is loading at Antwerp, another at Glasgow, Scotland, and a third at Bilbao, Spain. The combined tonnage of these three ships is 18,000 tons and the contract calls for 50,000 tons of rails to be delivered before the end of the year.

William Lund, a brother of the contractor and one of the prominent merchants of Guaymas, is authority for the above statements.

Despite the fact that the Southern Pacific Company is one of the strongest and largest railway systems operating in the United States, there was no specifications in the rail contract that the steel must be bought from United States firms.

The contract simply was let and the contractors had the world's market to search for what they wanted. Competition was keen for the contract, which was one of the largest for many years, and the company did not wish to hamper the bidders with any conditions which might restrict their placing the orders wherever the most advantageous connections might be made. That the contract was turned over to the Krupps, of Germany, by Lund & Co., of San Francisco, augurs that the German firm underbid its American competitors.

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GROWTH OF IMPORTS.

UNITED STATES IN THE LEAD.

The Financial Times, of London, in its issue of October 24, contained the following:

About a month ago we published statistics showing the value of the imports to Mexico for the first nine months of the year ended March 31 last, and referred to the growing imports of the Republic. We are now able to give the figures for the year ended June 30 last, which have just been issued by the Mexican Statistical Bureau, and these show a very satisfactory expansion of this branch of the trade. The value of the imports for the period was over $85,861,000 gold, or $7,500,000 more than for the previous year, and as the silver value required to purchase the merchandise was $184,000 less than would have been required a year ago, owing to the fall in exchange, the Republic has been able to import more goods at a smaller cost to itself. As regards the purchases from different countries, the United States heads the list of suppliers, its share being $48,303,000, an increase of $5,663,000 as compared with the previous year. The next in order is the British Empire, from which Mexico purchased goods to the value of $10,892,000, or $432,000 more than in 1903–4, while the imports from Germany amounted to $9,810,000, the improvement being some $261,000. On the other hand, the exports from Mexico show some retrogression, the value being $208,520,000, including the premium on gold, as compared with $210,312,000 for the corresponding period.

BANK CAPITALIZATION.

LARGE INCREASE OF CAPITAL STOCK.

A report from Consul Canada, of Veracruz, says the recent increase of capital stock effected by the Banco de Londres y Mexico and the Banco Central Mexicano, as well as that contemplated by the Banco Nacional de Mexico, has awakened among the directors of many of the local banks a desire of imitating those institutions. The consequences that might result from a simultaneous and altogether too rapid expansion of a group of financial concerns, the greater part of which are without markets for their stock in foreign parts and which do not enjoy the favorable conditions the larger concerns have succeeded in obtaining, seem to be overlooked. Consequently, for the purpose of limiting the circulation of specie or paper money to the necessities of the country, the Government will not permit local banks to increase their capital stock without first complying with certain restrictions prescribed by a recent executive decree.

CONSUL-GENERAL PARSONS writes as follows: A leading American grocer in Mexico City informed me that outside of the City of Mexico there is practically no American fruit used in the country; that he imports more than any other firm here, and in fact supplies the only other importing house with a good deal of its fruit. The amount imported is, however, very inconsiderable.

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FLAX AND SILK.

THE LINEN INDUSTRY.

COMMERCIAL IMPORTANCE AND VALUE.

DECREASE IN FLAX CULTIVATION IN GREAT BRITAIN—AN OPPORTUNITY FOR AMERICA.

Consul Moe, of Dublin, sends an interesting report on the Irish linen trade. Taken in connection with the reports of Consul Knabenshue, of Belfast, and Consul Mason, lately of Berlin, which appear in this number, it emphasizes the importance of the flax-raising question. It seems as if something might be done by American farmers to add flax raising to the profitable features of farm life. Consul Moe writes:

The manufacture of linen is carried on extensively in two districts in the United Kingdom, namely, in the north of Ireland and in the east of Scotland, says a writer in the Journal of the Department of Agriculture and Technical Instruction for Ireland. In both districts the industry has attained very large proportions, and "Irish" and "Scotch" linens have now a world-wide reputation. The linen industry occupies the third place in importance in our textile industries, the total value of linen manufactures exported from the United Kingdom for the year 1904 amounting to £5,727,054 ($27,870,707). Flax, which is the "raw material" of the industry, was formerly grown in large quantities in the United Kingdom, more particularly in Ireland, where at one time it was cultivated to such an extent that besides supplying the demands of the home industry a considerable quantity was exported. During the last fifty years, however, the cultivation of flax has gradually declined. At the present time Ireland provides only about one-fourth of the supply of flax required by Irish spinners.

In 1864 there were under cultivation of flax 301,693 statute acres, which yielded 64,920 tons, and in 1904 the acreage under cultivation was only 44,292 and the yield 9,341 tons.

FLAX-GROWING MOVEMENT.

The decline in flax cultivation is not confined to this country. In Germany, France, Austria, Belgium, Italy, and Holland the area under flax has been much reduced. Hungary would appear to be the only country besides Russia where the cultivation of flax has increased. The Russian flax-growing industry has assumed enormous proportions. It would appear that the cultivation of flax tends to drift from western Europe to Russia, where cheap labor can be obtained and where there are large areas of land suitable to the growth of this crop. No doubt

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other countries will continue to grow a certain limited amount of flax of a better quality than is usually produced in Russia, but the production of flax is shifting to the country where the cost is lowest. Russia supplies almost 80 per cent of the total flax produced in Europe.

The linen industry in the United Kingdom now occupies much the same position in regard to the supply of its raw material as does the great cotton industry of Lancashire, for these industries are dependent on foreign countries for the supply of flax and cotton, respectively. Of the raw material (flax, tow, etc.) imported into the United Kingdom during the year 1904 Russia supplied 47,083 tons, almost two-thirds of the total of 74,917 tons imported. Russian flax is a very necessary article to the linen industry of the United Kingdom, being very largely used in the Scotch and also in the Irish industry for the production of the lower qualities of linens. Compared with flax from France, Belgium, or Holland, Russian flax is poor in quality, but its price is correspondingly lower. The United Kingdom is Russia's largest customer for flax, and takes between 30 and 40 per cent of the total quantity exported.

NO GAMBLING IN FLAX.

In so far as there is an entire absence of gambling in "futures," which has so demoralized the Lancashire trade, the conditions under which the business of the supply of flax for the linen industry is conducted present a very healthy contrast to those which prevail for the supply of raw cotton. Unfortunately, however, the flax trade labors under a difficulty of another kind. Of flax-producing countries, Russia is the one of which least is known, because, owing to its extreme type of continental weather, an uncertainty always exists as to the result of the crop. Long spells of drought on the one hand and of rain on the other often injure the flax. The retting operations during the autumn are liable to interruption from the setting in of an early winter, and the prospects of a good crop have sometimes been completely nullified owing to the prevalence of unfavorable climatic conditions during the retting process. It is by no means an uncommon experience in Russia for flax to be "snowed"—that is, covered with snow while spread on the fields—and it has often to remain in this state until the snow melts in the spring. Retting operations, too, have often to be put off until the spring so as to secure more favorable weather. The Russian flax markets depend for their supplies on the existence of sledge roads which are often impracticable, and on river communication which, unfortunately, sometimes closes early in the season. The closing of the Baltic navigation in winter is also a factor, which is of serious moment to the export trade. The absence of official estimates or reports as to the crop affords an opportunity for the circulation of all kinds of alarmist rumors, and there is usually an annual crop scare.

The cultivation of flax for its fiber may be said to be confined entirely to Europe, the only exception to this being that it is now produced to a certain extent in Siberia. Outside Europe it is cultivated for its seed.

CAUSES FOR CURTAILING CULTIVATION.

The low prices prevailing for flax prior to the year 1900 had, undoubtedly, the effect of reducing the area under this crop, and it

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would seem that most of those engaged in our linen industry were unaware of the extent of the diminished supplies. The poor flax crop of 1899 and the higher prices demanded brought about a crisis in the flax trade, and at the close of the year some qualities of Riga flax had advanced almost 100 per cent in price. The rise in prices unfortunately led in some instances to litigation regarding the fulfillment of contracts between British firms and certain sellers of flax in Russia. Throughout the year 1900 the trend of prices was in an upward direction. Unheard of prices were demanded by foreign flax growers, and as the year advanced the lack of orders at the higher rates forced manufacturers to curtail production. A number of firms in the spinning, weaving, and finishing branches of the trade were obliged to have recourse to short time.

The first half of the year 1901 saw prices, with some slight fluctuations, on a still higher level, rates advancing smartly as much as $14.60 to $24.33 per ton. The effect of the abnormal rise in prices was disastrous to the linen trade. Manufacturers could not obtain equivalent prices for their goods, machinery was lying idle, and mills were working on short time. The inevitable reaction came, prices falling as much as $82.73 per ton from the top figures for some grades. These violent fluctuations in prices brought about a crisis in the linen trade, which resulted in the failure of a few firms.

As regards flax, 1902 was a most unsatisfactory year. Russian dealers kept advancing their quotations, and obtained advances ranging from £3 to £5 per ton in the month of June on development of short supplies. The produce of the new crop was at first made at very high prices, but the Russian dealers began to press sales. As the autumn advanced the pressure to sell became more severe and prices fell some $34 to $39 per ton for certain varieties. It was reported that the Russian flax crop of this year (1902) was very large, and the great uncertainty as to future prices acted as a drag on the Irish linen industry. No one cared to purchase flax until more reliable information as to the reported increase in the crop was available, when a more definite opinion might be formed as to the figures to which prices for the new crop would probably fall.

CALCULATIONS NOT REALIZED.

All calculations as to lower prices based on the reported larger crop of 1902 were upset during 1903. Prices of flax again began to rise in January, 1903, and, with the exception of some slight fluctuations, continued to advance throughout the year. The prices of flax in December, 1903, were higher than at any time within the recollection of the present generation. The year 1904 opened with flax prices at their highest figures. With a slight falling tendency very high prices ruled till September, when a further decline occurred, and the year closed with prices on a still lower basis. The advance in the prices of flax, which commenced in 1899, reached its highest point at the close of 1903. As the prices of flax advanced, the depression and lack of demand for linen manufactures became more accentuated, and production was still more curtailed. A considerable proportion of machinery was almost everywhere lying idle, and short time was being worked in all branches of the linen trade. The extent of the depression can

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be seen from the following table showing the export of linen from Great Britain in the years given:

Year.	Yarn.	Piece goods.	Year.	Yarn.	Piece goods.
	Pounds.	*Yards.*		*Pounds.*	*Yards.*
1899	18,152,400	174,279,000	1902	14,370,400	163,128,600
1900	16,361,800	154,800,100	1903	14,092,300	154,877,800
1901	12,971,100	150,215,300	1904	14,758,100	161,550,600

The crisis brought about by the advancing prices of flax proves how disastrous to the trade is the high price of raw material. When the price of flax is driven beyond a certain limit, demand turns to a cheaper article, which is used as a substitute for linen.

The following table gives the average cost per ton of flax used in the linen trade of the United Kingdom, year 1902:

Belgian	$311.46
Irish	243.33
Dutch	238.46
French	214.13
Russian	180.06

OPENING FOR AMERICAN FLAX.

BRITISH DEPENDENCE UPON RUSSIAN FLAX.

Consul Knabenshue, of Belfast, in the following report makes a strong appeal to the American flax growers to cultivate the crop for its fiber instead of, as at present, for its seed. By complying with certain requirements, which Consul Knabenshue feels confident they can do, our flax growers will find a large market for their fiber not only in Ireland, but in other European countries.

The July issue of the monthly journal of the department of agriculture (Ireland) contains an article by Mr. A. L. Clark, which points out the danger to the linen industry of the United Kingdom of being dependent for their supplies of flax upon Russia. On an average about 75 per cent of the total flax supply of Europe comes from Russia, and the cultivation of flax shows a continuous drift from western Europe to that country, where labor is cheap and large areas of land are suitable for flax growing. Mr. Clark laments the fact that Russian official statistics "are not available at a time when they would be of practical use to those engaged in the linen business," and says:

"Of flax-producing countries Russia is the one of which least is known, because, owing to its extreme type of continental weather, an uncertainty always exists as to the result of the crop. Long spells of drought on the one hand, and of rain on the other, often injure the flax. The retting operations during the autumn are liable to interruption from the setting in of an early winter, and the prospects of a good crop have sometimes been completely nullified owing to the prevalence of unfavorable climatic conditions during the retting process. It is by no means an uncommon experience in Russia for flax to be 'snowed'—that is, covered with snow while spread on the fields—and it has often

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to remain in this state until the snow melts in the spring. Retting operations, too, have often to be put off until the spring, so as to secure more favorable weather. The Russian flax markets depend for their supplies on the existence of sledge roads, which are often impracticable, and on river communication, which, unfortunately, sometimes closes early in the season. The closing of the Baltic navigation in winter is also a factor which is of serious moment to the export trade.

"The foregoing are some of the conditions which yearly tend to make the supply of flax uncertain, and, in addition to these, there is always the possibility of the area under this crop being either increased or reduced by some hundreds of thousands of acres.

"The absence of official estimates or reports as to the crop affords an opportunity for the circulation of all kinds of alarmist rumors, and there is usually an annual crop scare."

The Irish Textile Journal, the recognized organ of the Belfast linen trade, in its August issue reproduces the foregoing article, and comments thereon as follows:

"We think the trade should make some combined effort to secure other supplies of raw material than are at present available. It is certainly anything but satisfactory to be dependent on Russia for the bulk of what we use. Ireland can never compete with Russia in these cheap flaxes, but there are other countries where flax is grown extensively, chiefly for seed, no doubt, but where possibly a little instruction and the certainty of a market would induce the growers to cultivate the crop for fiber.

"It is a matter that might very well be taken up by the department of agriculture, not only in the interest of the linen trade, but from the standpoint of the Irish farmer as well. There should not be much difficulty in getting the Russian authorities to issue official reports from time to time during the growing and retting periods, if they were officially approached."

FLAX CROP OF THE UNITED STATES.

Under date of June 9 last this consulate reported on the "Decreased flax production in Ireland," which report was published in Daily Consular and Trade Reports for July 17. In it the view was expressed that "there is no reason why the United States should not produce an ample supply of flax fiber." The extracts above quoted give added force thereto. A very large acreage of flax is raised in the United States for seed alone. This being secured, the straw is burned or otherwise disposed of as a waste product. This is notably true in North Dakota and elsewhere in the Northwest. The question is now raised among Belfast linen men whether this fiber, which is now a waste product, can not be made a source of supply to compete with Russian flax.

RAISING FLAX FOR LINEN.

When flax is raised for linen, it is sown closely so that the plants will grow upward toward the sunshine, and thus produce a longer fiber. When grown primarily for the sake of the seed, only about one-fourth as much is sown per acre. The plants, having room, develop branches, each with its blossoms and seed. Then, too, the flax for fiber is pulled, so as to get the longest strands possible; while

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in the United States the flax, being grown only for seed, is cut by an ordinary mowing machine. If the cutter bar were set as closely to ground as possible, there would not be more than 3 inches of loss, in root and stubble, in the length of the fiber. If the seed were closely sown and the straw made available for the manufacture of linen, the loss in the yield of seed per acre would be more than made up by the value of the flax available for manufacture.

THEORETICAL OBJECTIONS TO AMERICAN FLAX.

American flax being an unknown article to Irish linen manufacturers, it will be necessary to send over small consignments for experimental tests. Unless it can be properly retted and scutched by experienced persons the straw itself should be shipped. It should be pulled, well dried, made up in small bundles with heads all one way, and then loose packed in bales. Heavy hydraulic pressure is inadmissible. Dewretting injures the strength of the fiber.

The theoretical objections advanced here to American flax are: That the soil on which it is grown is so strong that the fiber is thin, and consequently weak; that this luxuriant growth causes the plant to throw out branches near the surface of the ground, which makes a crooked and knotted fiber; and that, when mowed, the fiber is too short. The first two of these do not appear well founded.

AMERICAN FLAX TESTS.

A consignment of pulled flax, grown in Michigan, has just been tested here. Part was of scutched flax, the remainder straw. Tests of the linen yarn spun therefrom were made under the supervision of the American consul, which showed it to be equal to the Russian product in tensile strength, while it spins quite as smoothly and fewer particles of the stalk adhere to the fiber. So this experiment disposes of the first two objections; the third (mowed flax) must remain for future tests. If it proves to be a practicable competitor with the Russian product, by such an experimental test, it will not only prove a source of large income to American farmers, but will be of benefit to all American buyers of linens, in that it will tend to reduce prices, for the cheaper the raw material the cheaper the finished product.

AMERICAN FLAX FOR GERMANY.

OPPORTUNITY FOR AMERICAN AGRICULTURISTS.

Consul-General Mason points out, in the following report, large possibilities for the sale of American flax to German textile producers:

In June, 1900, it was reported from this consulate that a leading merchant at Hirschberg, in Silesia, whose name was given, wished to establish connections with the United States for the purchase of flax fiber, to be imported to Germany for consumption in the important linen industries of eastern Saxony and southern Silesia. It was further stated that Germany was then importing (1899) 49,736 tons of flax fiber, of which about nine-tenths, 45,177 tons, came from Russia and the remainder principally from Austria-Hungary, but that, owing to uncertainties of climate and more or less unsettled local conditions,

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the Russian supply was often uncertain in quantity and quality and variable in price, and that, since Germany for various reasons produced comparatively little flax fiber, it was desired to open a new and more reliable source of supply in the United States. The report was published in Monthly Consular Reports for September, 1900, and some more or less tentative correspondence ensued, but no practical result ever came of it. The American farmers, as it appeared, raised flax only for the seed; they knew little about growing fiber, the pulling, retting, breaking, and hatcheling involved an amount of hard labor for which they were unprepared—in short, there was no supply of American flax fiber in the market for export, and nothing tangible ever came from the suggestion.

PRESENT CONDITIONS.

To-day substantially the same conditions exist in the German linen industry as were then described. The spinners imported and consumed last year 42,466 tons of raw flax fiber, of which 36,520 tons came from Russia, 4,558 tons from Austria-Hungary, and the remainder, in about equal quantities, from Holland and Belgium. For this imported fiber the German spinners paid all the way from $150 to $1,000 per ton, according to quality. They are often obliged to use a much lower and cheaper grade than they would gladly pay for, because the fiber of superior quality is not obtainable at any price. Finally, a highly intelligent American, Mr. John A. McKay, of Michigan, who is technically familiar with and financially interested in the whole subject of flax growing and the linen manufacture, has been over here studying the problem as it appears in Ireland, England, and Germany. He is impressed by the three facts which have already been cited, viz, the shortness and uncertainty of the flax supply, particularly the better qualities, its high price, and the eagerness with which manufacturers, particularly those in Germany, hail the prospect of a new and increased supply from an original and hitherto undeveloped source.

FLAX WILL GROW IN AMERICA.

Mr. McKay asserts that there is no apparent reason why this new source of a standard raw material, which is only less important than wool and cotton, should not be established and developed in the United States. There are many varieties of the flax plant, but they all grow abundantly and perfectly throughout the whole belt of States from the Canadian frontier as far south as Tennessee. Certain States, among which are New York, Ohio, Michigan, Wisconsin, Iowa, and notably Oregon and Washington, are especially adapted in respect to soil and climate for its successful cultivation. As every farmer knows, flax grown for seed should be sown broadcast and rather thinly distributed, so that each plant as it grows can branch out and develop abundantly the bolls or spherical pods which contain the seed. Flax grown in this way produces comparatively poor fiber, for the reason that the sun penetrates among the thinly growing stalks, dries the ground, and influences the nature and quality of the stalk.

Flax grown for fiber should, on the contrary, be sown so thickly that the growing plants form a dense green mass, which holds the moisture of dew and rain and turns the energy of the plant into the creation of a sturdy, fibrous stalk, bearing at the top a few bolls containing seed of more or less variable quality.

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TREATMENT IN EUROPE.

In European countries flax which is to be used for the production of fiber is pulled up by hand and laid in bunches to be retted and further treated by breaking, hatcheling, etc. It can also be cut with a scythe or reaping machine; but this sacrifices the valuable fiber of the root and lower portion of the stalk, so that in the best and most economical practice the crop must still be pulled. It is said that in the United States machines for pulling, breaking, and hatcheling flax have been invented and are now used with entire success for accomplishing the processes which in Europe, notably in Russia, are generally performed by hand. The proposition submitted is, therefore, whether the time has not come for the farmers of the United States to seriously consider this new product which they may obtain from their lands simply by the adoption and practice of methods which are standard, perfectly understood, and no longer experimental.

FINE LINEN A LUXURY.

It has been demonstrated that several of the States above named will grow flax fiber of the long, fine, silky quality, which commands the highest prices in the European markets. Quantities of it have been brought to Ireland and spun into threads up to Nos. 60 and 70 with entire success. The time will come, doubtless, when the most, if not all, of the linen supply, which now forms such a heavy and costly article of import, will be grown, spun, and woven in the United States. But even then the mills and factories of Ireland, England, France, and Germany will still always be in the market, as now, for fiber from which to produce the linen fabrics that are used in their own countries and exported to other European nations, the southern hemisphere and the East. In the opinion of experts the demand for American flax fiber if once met and supplied will be large, growing, and constant. Linen of all but the most ordinary qualities is now a luxury beyond the reach of a multitude of working people, who use cheaper cotton fabrics in its stead. The cheapening of the raw fiber by an extraordinary increase in the supply would unquestionably develop and extend its use to an important degree.

CROP OF THE WORLD.

LARGE DECREASE AND THE CAUSE.

Consul Atwell, of Roubaix, reports a falling off in the world's flax crop. He sums up the situation with a loss of grain, failure to ripen, inferior fiber, and small yield. He writes:

Returns from different countries denote a falling off in the flax crop. Russia, the great provider of European markets, announces that the harvest from her great plains is on the whole bad.

The complaint is general; the cause—bad weather.

In the department of the north the harvest can not be compared with that of 1904, which was magnificent and the flax superior in quality.

The situation may be summed up as follows: Loss of grain which could not ripen or ripened badly, inferior quality of fiber, and small yield.

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One-eleventh of a hectare[a] has yielded this year 500 kilos of grain, bulk weight, but the loss has been immense.

The ordinary yield of fiber from this surface is about 140 kilograms. This year the fiber prepared for spinning has amounted to only 90 or 95 kilos. The difference is even greater when compared with the harvest of 1904, which yielded 150 kilos of fiber.

As a rule, farmers have been obliged to accept less than the average price. Some, who sold their unharvested crops at fairly remunerative rates, are now in difficulty, as the purchasers find the flax has depreciated in value by reason of storms since the purchase on the fields, and refuse to pay.

Flax merchants are equally unfortunate, having bought the raw material at an average price of 85 francs the eleventh part of a hectare. They receive 1 franc 18 centimes the kilo for pure fiber of ordinary quality.

As the yield this year has been only from 90 to 95 kilos, or about 110 francs in value for the surface mentioned, and as the flax has to pass through many different stages of preparation, one may ask what profit the merchant will make.

There will be great loss in grain also. Ordinarily the eleventh part of a hectare yields 85 kilos of grain, the mean price of which is 25 francs the hundredweight, or about 233 francs 75 centimes the hectare.

The grain of the present harvest is good only for oil cake, which brings such a low price that many flax men have neglected to make it this year. This shortage in oil cake will naturally increase its price. Last year oil cake made from flaxseed sold for 16 francs the hundred kilos; this season it has already gone up to 20, and will go still higher. Great fluctuations may be looked for in flaxseed and its products.

SILK INDUSTRY.

INCREASED PRODUCTION IN CHINA.

EFFORTS TO INCREASE THE OUTPUT—VALUE OF DIRECT TRADE.

Consul Anderson, of Amoy, furnishes a valuable report on silk production in China, and urges American manufacturers to deal directly with Chinese producers and merchants when purchasing the raw material:

It is probable that the production of raw silk in China is considerably greater than that assigned her heretofore. In recent estimates, made by well-informed silkmen in the United States and Europe, the Chinese Empire has been credited with producing about seven-fifteenths of the world's raw silk. There is no system of accounting or checking up the production of any crop in China, especially a crop like silk; hence, it is impossible to give accurate figures of production. Last year China exported 12,251,300 pounds of silk of all kinds, valued at $54,778,788 gold. But this falls further below her total production than the world has ever been disposed to believe. As in cotton and tea, China produces more silk for its own use than it produces for export. It is estimated by a practical silkman, well informed as

[a] 1 hectare=2.471 acres.

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to Chinese consumption as well as production, that the average quantity of raw silk reeled from cocoons raised in Chekiang Province is not far from 5,333,333 pounds.

EXTENT OF THE TRADE ESTIMATED.

In the year this estimate was made Hangchow exported 779,300 pounds of silk of all kinds, Ningpo 42,100 pounds of all kinds, and Wenchow 4,800 pounds of all kinds. The three ports of the Province, therefore, sent out a total of 826,000 pounds. Allowing for an equal amount exported by the likin route, which is a liberal estimate, since Ningpo and Wenchow probably sent none by that route, the total exports of the Province would seem to be 1,652,000 pounds, or about two-fifteenths of the total of the exports of the Empire above noted. Assuming that the home consumption of silk in Chekiang Province is that of other provinces, the total production in the Empire ought to be in the same proportion to its exports, as 1,652,000. This would make the total production 39,999,990 pounds. While the proportion of silk going from Hangchow to Shanghai for further export by the likin route may be larger than that by the customs route above given (an equal amount), it may also be said that the proportional home consumption of silk in Chekiang is larger than in most other silk-producing provinces. I believe the estimate of the Chekiang Province is low, and these figures, while in no sense accurate, represent fairly the actual production of silk in China, which is certainly three times the exports, and nearly half the production of the world. And this production can be quickly and easily increased fully 30 per cent by increased demand for Chinese raw silk or silk products.

There is increasing evidence that American silkmen are buying raw silk from Japan which is Chinese raw silk worked over to a slight extent, and in some cases the actual raw silk as it is exported from China to Japan, where it is re-marked and graded and sold as Japanese silk. The only reprehensible feature about this business is found in the fact that there is one or more unnecessary profits added to the cost of the raw silk to the manufacturer without the producer deriving any benefit. The American silkmen ought to grasp the nature of their opportunities of dealing more directly with China. It is an economic crime that the second silk manufacturing nation in the world should fail to get its proper share of supplies from the greatest raw-silk producing country.

EFFORTS TO INCREASE PRODUCTION.

The indications are that the silk production of this Province in China will be increased in a very short time. Within the past few weeks large quantities of mulberry tree sprouts have been imported through Amoy for planting in the interior in the vicinity of Chang Chew, a large city about 30 miles inland, and the understanding is that an effort will be made to make use of the lower hill lands formerly used for the production of tea in the growing of mulberry trees for silk. At present practically no silk is produced in this vicinity. There is no particular reason why this should be the case, and it is probable that the attempt to establish the industry now being made will open up to the business considerable country which has of late

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years been of little value, owing to the destruction of the Amoy Oolong tea trade. Silk is produced in great quantities farther south, in the Canton district, and farther north, in the Hangchow district. That it has not been produced here is due more to the disposition of the Chinese to grow the crops their fathers grew before them than to anything else.

I am told that the artificial silk differs from the real in two essential points, viz, its inferior textile strength and the fact that it offers much less resistance to dampness. Consequently it is at present little used for the weaving of stuffs intended for wearing apparel; but for trimmings, passementerie, etc., and for uses to which raw silk fiber is put, where textile strength is not essential, it can advantageously replace the real article, and can probably be used in weaving in combination with real silk and other strong fibers.

PRICES OF THE NEW PRODUCT.

The prices for this new product, at present current in Italy, range from $1.50 to $3.25 per 2.2 pounds, but I am told that it is very much heavier than real silk, and that a square of silk stuff of a given size will weigh nearly half as much again if woven from the artificial fiber. If this is true, the relative price of "cellulose" silk would or will be increased some 50 per cent, but although the specific gravity of the artificial is undoubtedly greater than that of the real, I am inclined to believe that this statement has been exaggerated. Nevertheless the price would still remain much lower than that for which real silk can be produced in Italy.

In order to protect the silk industry from the dangers of an unfair competition, the following suggestions have been presented to the Government:

1. A reduced taxation.
2. A reduction in railway freights on cocoons, silk, and coal to the rate current in France.
3. Better shipping facilities and lower freights between Italy, the Levant, and Asia.
4. Suppression of export duties on raw silk, of import duties on spun and carded silk, and the reduction, through diplomatic channels, of import duties levied by other countries on Italian silk goods.
5. Extension of, and improvement in, the training schools for the silk industry, and the establishment of traveling scholarships for the study of this industry in other countries.

SILK IN ITALY.

LARGE INCREASE IN IMPORTS AND EXPORTS.

Consul Dunning, of Milan, reports a marked increase in the production of silk in Italy during the first six months of 1905. He writes:

There has been an increase of silk importations into Italy during the six months, amounting to $3,105,786, but this is more than counterbalanced by an increase in silk exports from Italy for the same period of $11,371,374. Of the increased imports, a million dollars is charged to silkworm eggs and cocoons, and a million and a quarter to European

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raw silk, the balance being charged to heavy importations of laces, waste, and other textiles. The most noteworthy item in the increase of silk exports from Italy for the six months was that of raw silk, amounting to $5,500,000. Twisted silk amounting to $4,384,000 was exported, and there were strong increases in shipments of silkworm eggs, waste, textiles, etc. There was some falling off in the exports of silk waste.

IMPORTS OF COCOONS—EXPORTS OF SILK.

Of 28 tons of silkworm eggs imported during the period, over 26 tons came into Italy from France. Of the 1,467 tons of cocoons, 680 tons were imported from Turkey. Of the 1,116 tons of raw silk, twisted silk, etc., 577 tons were imported from China, France, and Japan. In sending in colored silks Switzerland led, with 1,740 of the total of 2,722 tons, while France and Germany made some contributions. Germany preceded all countries in supplying silk manufactures imported, supplying 835 of the 1,735 tons required.

As to exports, they were divided as follows: Of the total exports of cocoons for the six months, amounting to 71 tons, 62 tons were shipped to Australia and Hungary. In raw and twisted silk, etc., Switzerland took 1,562 tons, Germany 998, and North America 1,114. France, Austria, and Hungary took together 4,300 tons. Of raw silk waste France took 637 tons, while the balance of 664 tons went chiefly to Switzerland and North America. South and Central America received a certain quantity of silk thread, as did also Turkey, Egypt, and France; but the major portion of this particular export, 101 tons out of a total of 154 tons, was distributed in smaller lots among countries not mentioned in the present statistics.

During the six months just closed 6,108 tons of silk textiles and manufactures were exported, some 1,329 tons going into Switzerland.

ARTIFICIAL SILK.

ANXIETY AMONG CULTIVATORS.

Consul Nash, of Venice, reports remarkable effects resulting from the invention of a process for producing artificial silk from the cellulose of gun cotton. He writes:

The development in the production of so-called "artificial silk," made from the cellulose of gun cotton, etc., by a great variety of processes, has caused much anxiety among cultivators of the silkworm in this consular district and throughout Italy generally. This production, which has already reached over a million and a half of kilograms and which, according to the president of the Silk Association of Milan, will go on increasing, is causing a much greater commotion than did the invention of the process of "mercerizing" cotton, which some years ago reduced the price of certain silks and materially affected its cultivation in Italy, because, beyond a given point, mercerized cotton could not compete with the article it was supposed to imitate, whereas the possibilities and limitations of "cellulose" silk are still hypothetical, particularly as authorities on the subject agree that the price will decrease and the quality improve as the processes of manufacture are developed.

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TARIFF.

CANADA.

PARLIAMENTARY COMMISSION.

EFFORTS TO INCREASE RATES ON UNITED STATES GOODS—HEARINGS BEFORE THE COMMISSION.

Special Agent Pepper writes interestingly from Nelson, British Columbia, about the efforts of Canadian boards of trade, lumbermen, miners, etc., to secure the passage of laws in the Dominion putting duties on American goods imported into any part of British Columbia. The lumbermen are asking for a $2 per 1,000 duty on American lumber with a view to meeting the $2 per 1,000 duty charged by the United States on Canadian lumber imported into the United States. Hearings have been held at Nelson, Rossland, Trail, Greenwood, and other places. The fruit dealers of British Columbia are seeking the retention of existing duty rates. They affect to fear the codling moth and San Jose scale. The mining interests are also involved and very much in earnest in their desire to have something done in their favor. Their chief concern is a continuance of the present bounties on lead. The report follows:

The tariff commission is now giving hearings on the proposed general revision of the tariff at various points in British Columbia. The subjects of chief concern to this Province are lumber, the mining industry (especially the bounty on lead), and fruit growing.

The hearings opened at Nelson were continued at Rossland, Trail, Greenwood, and other places. Memorials have been presented by boards of trade and similar organizations and oral testimony has been given by individuals. A concerted movement has been made by the lumbermen to secure a duty of $2 per 1,000 on rough lumber imported from the United States. The lumbermen of this section, which is known as the boundary district because of its proximity to the State of Washington, have joined with the lumbermen of the coast, as represented in Vancouver and Victoria, in asking for the imposition of this duty. The chief reason urged is that since the United States imposed a duty of $2 on Canadian lumber, the same schedule should be adopted by the Dominion. This was the rate until 1896, when the duty was removed by the Dominion government. A duty is asked on shingles, though the mills of British Columbia, through the superiority claimed for the cedar of the Province and for other reasons, are able to export to the United States in spite of the duty on shingles imported from Canada.

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COMPLAINTS.

One ground of complaint by the lumbermen of British Columbia is that the mills of Washington and Oregon export their surplus and dump refuse lumber in Canada, the so-called "antidumping clause" not being effective because that provision applies only to dutiable goods. Should a duty be imposed, it is claimed that this provision of the Dominion tariff law could be made effective and the Washington and Oregon mills could be kept from thus disposing of their surplus when it is unprofitable to market this at home or to hold it for another season.

During the hearing given the lumbermen Minister Fielding of the commission stated that the total output of lumber west of the Great Lakes last year was 850,000,000 feet, while the rough lumber imported from the United States amounted to only 82,000,000 feet, so that the imports were therefore not quite one-tenth of the total and the Canadian lumbermen had 90 per cent of the market. The implication was that should the tariff on lumber be imposed it would be prohibitive and would shut out all imports from the United States.

Representatives of the fruit growers asked that the existing duties on fruit be allowed to stand. They controverted the statements of the fruit dealers of Manitoba, who had asked for a reduction of duties. The fruit growers stated that their competition in Manitoba and the Northwest was with the fruit imported from Washington and Oregon. They declared that the codling moth and the San Jose scale up to this time were unknown in British Columbia, but that if greater strictness were not shown in the inspection of fruits from Oregon and Washington these pests would be likely to appear.

DEMANDS OF SMELTERS.

The smelting industry, which is a very extensive one in the boundary district, in the various hearings has expressed concern chiefly for the continuance of the bounty on lead, which will expire in two and a half years unless it is prolonged by the Dominion government. The lead bounty in the past year was $326,000, as against $191,000 in the previous year. The subject was presented in a memorial of the Nelson Board of Trade. This memorial stated that the total lead production of Canada for 1904 was $1,637,000, of which $1,422,000 was produced in British Columbia. It was declared that the lead industry of the Province, through the action of the United States in imposing prohibitive import duties, lost its best and natural market and was dwindling to a very small limit until the government of Canada in 1903 passed the act to provide for the payment of bounties on lead contained in lead-bearing ores mined in Canada.

This action recently has been supplemented with an increase of import duties on dry white lead and dry white lead ground in oils. As the result of this legislation it was declared that the advance in the production of lead ores had been fully 500 per cent, while the increase in the number of operating mines producing ore containing lead had been fivefold. It was stated that in the silver-lead mines in British Columbia, including the concentrating mills and mine plants, the investments amounted to $20,000,000. While an assurance that the bounty on lead would be continued was the most important factor in maintaining the present prosperity of the lead producers, various

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changes in the tariff were suggested with the purpose of correcting the irregularities on pig lead, as compared with sheet lead and in bars, lead pipe, and other lead manufactures. It was further suggested that, as a corollary of the recent increase of duty upon corroded lead and mixed lead paints, stringent regulations should be adopted to prevent the sale of adulterated paints. A tariff classification similar to that found in the United States was recommended.

In the testimony of individual witnesses it was stated that under present market conditions the lead bounty is equivalent to a protection of 20 per cent, and the highest it can go is 30 per cent. The Canadian consumption of lead in all shapes is approximately 15,000 tons, and since the production can be stimulated far beyond this amount some question has arisen in regard to foreign markets. Competition comes chiefly from Spain, Sicily, and Italy, where labor is cheap. A statement was made by one witness that, though the United States had ceased to buy Canadian lead before the bounty was granted, this was due to temporary conditions. It was also stated that since the establishment of lead refining at the Trail smelter it was gradually controlling the Canadian market by underselling the English product. A representative of the Trail Smelter Company stated that the surplus Canadian lead went to the Orient. Australia was the chief competitor.

In the hearings at Rossland, Trail, Greenwood, and other points, specific requests were made for reductions on various classes of importations, as well as for a continuance of the lead bounty and a duty on lead products.

DEMANDS FOR LOWER DUTIES.

Among the requests for lower duties, or no duties at all, were the following:

The removal of the duty on fluorspar to enable the manufacture of electrolyte by the Trail refinery, wanted in connection with the manufacture of electrolytic lead; the removal of the duty on steel rails, when used for mining purposes; the removal of the duty on raw materials from which explosives are made; the reduction of the duty by 50 per cent on explosives and candles; the alteration of the tariff schedule on mining machinery to protect mine owners from poorly made Canadian machinery.

The three boundary smelters—Granby, Boundary Falls, and the British Columbia Copper—presented a memorial asking for heavy reductions in the tariff on mining machinery. They asked for a reduction of 20 per cent in the duty on structural iron and the removal of the duty on bar steel used in smelters, as well as the removal of the duty on candles, the statement being that suitable candles are not made in Canada. These industries also asked for the removal of the duty on rails for mines and smelters; on steel castings not made in Canada; on slag truck; on furnaces, and on repair and parts of machinery. Much stress was laid on dynamite. This costs in the Boundary the American price and 60 per cent United States duty. The allegation was made that a combine exists between dynamite dealers in the United States and Canada to keep up the price.

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MANUFACTURERS AROUSED.

PROTECTION AND RECIPROCITY URGED.

In connection with the foregoing report of Special Agent Pepper it is worth while to note certain interesting conditions connected with Canadian trade and tariff revision. According to a clipping from the Toronto Globe, forwarded by Consul Chilton, of Toronto, these matters figured prominently in the speech of the president of the Canadian Manufacturers' Association. In it the president says that it was expected that the present tariff commission, by a thorough revision of the tariff, would equalize competition under which manufacturers labored. He urges protective tariffs that Canada may do what the United States has done. He urges reciprocity when and where it can be made to serve Canadian interests; he does the same in regard to preferential tariff rates. Extracts from the speech follow:

AN UNHEALTHY CONDITION.

In the figures showing the total amount of Canada's foreign trade a falling off from the previous year of $7,500,000 was noticeable. Exports were less by about $10,000,000, owing to decrease in exports of agricultural products, while imports had increased by $2,500,000. This discrepancy revealed an unhealthy condition, as a young country like Canada should not import so greatly in excess of exporting.

Canada's manufacturing industries, representing an estimated annual output of about $650,000,000, were gradually making headway in their export trade. Last year the products of factories employing men and machinery, together with other manufactured goods, in value amounted to $102,000,000, or about 54½ per cent of the total export of Canada.

The Government's policy in appointing commercial agents to foreign countries and in extending and developing this system was indorsed by Mr. George, and it was suggested that they even farther extend this service in many centers, particularly within the Empire.

The speaker, however, condemned that policy of the Ontario provincial government in passing legislation imposing taxes on all Canadian companies incorporated outside of their respective Provinces, and by Prince Edward Island and British Columbia in taxing nonresident Canadian commercial travelers.

THE TARIFF SITUATION.

Referring briefly to the tariff and labor legislation of the Dominion Parliament, Mr. George expressed satisfaction that the government commission was now taking evidence for the purpose of thoroughly revising the tariff. "We believe," said the speaker, "that by a just, wise, and careful revision, calculated to meet present-day conditions, an immense impetus will be given to our industrial life, which will be beneficial to all and detrimental to none of our people."

No longer was the tariff made a question of party politics nor class legislation. Practically all Canadians recognized in the tariff a business and not a political proposition, calculated to attract capital and industry by taxing the manufacturers of the United States and other countries.

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TIME FOR RECIPROCITY.

"It is useless to endeavor to conceal the fact," continued Mr. George, "that the large proportion of the goods we would shut out are made in the United States. The people of the Republic to the south are a great people—their country is a great country. They have lived for themselves, and by their policy of protection have made wonderful progress. We, on the other hand, have stood by and watched them increase their tariff year by year, shutting out almost completely the products of Canada; we, too, have watched them year by year taking a greater advantage of our lower tariff, and sending more and more of their goods to Canada, thereby retarding the development of our industries. Last year we imported from the United States goods to the value of $162,000,000, or over 62 per cent of our total importations. This enormous sum was about equally divided between dutiable and free goods. The increase in dutiable goods over 1904 was about $6,000,000, and about $23,000,000 greater than in 1902, the year of the Halifax resolution. The total value of dutiable goods imported for the last fiscal year is $157,000,000, and I am safe in saying that from $65,000,000 to $70,000,000 worth of these goods could be made to advantage at home.

"The day for a reciprocity treaty, gentlemen, is now. The United States has achieved the very results which we in Canada are striving for, and by its policy of protection has established its industries, and we can do nothing better than follow the example so well set us until we achieve something like the same results. Do not mistake me as advocating a tariff similar to theirs. What we want is one adapted to the needs and conditions of our own country, and one which will lead to the establishment and development of our own industries. I feel that to-day the people of Canada are unanimous in demanding a tariff that will prevent the United States from being able to sell in Canada the products of its farms, forests, and factories on almost equal terms with the products of our own people.

THE TARIFF OF 1906.

"The finance minister of Canada has announced that the new tariff would be one of three schedules. This will give an opportunity to have a sufficiently high tariff against unfriendly tariff countries, and an opportunity also to give to the British Empire a preference less hurtful to Canada and more advantageous to the Empire. The association has declared itself in favor of a policy of preferential tariffs, and believes in making this policy effective, notwithstanding the criticism of those who refuse to understand the simple, reasonable, and patriotic stand we have taken. Our position is briefly this: We desire to make in Canada everything which we can advantageously produce and to buy our surplus requirements, as far as possible, from British sources. What could be more simple?

"The tariff commission has been appointed to revise the tariff. It is not probable that there will be another general revision for some years, so I can not impress upon you too strongly the importance of laying your requests before the commission. And further, let me say to you, that your requests should be conservative and the reasons you advance should be conclusive. I am hopeful that the new tariff will not only properly protect our industries, but will be an incentive to the establishment of many new ones."

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COLOMBIA.

NEW RATES AND REGULATIONS.

DUTIES ON TOBACCO, CIGARETTES, MATCHES, LIQUORS, AND HIDES.

Mr. A. B. Snyder, Secretary of Legation at Bogota, reports that, according to a government decree, dated August 25, the following duties are assessed on tobacco, cigarettes, matches, foreign liquors, and hides:

A duty on the consumption of cigarettes and matches will be assessed as follows: Foreign cigarettes, or cigarettes manufactured in the country from foreign tobacco, $1 per kilogram; cigarettes manufactured in the country from native tobacco, 50 cents per kilogram; for each kilogram of matches 25 per cent more than that laid down in the customs tariff. These duties are exclusive of the duties which said articles must pay in the custom-houses.

The Central Bank shall conclude contracts, for a term of not less than two years, with the owners of cigarette and match factories established in the country, so that they may continue the manufacture and sale of the said articles by paying the duties on consumption in the manner most advantageous to the collecting of the revenues.

The payment of the duties on consumption of native-grown tobacco will be 15 cents for each kilogram, without regard to the class to which it belongs.

Foreign liquors will continue paying, in the departments of Cundinamarca, Nariño, Cauca, and Tolima, the same customs duties and duties on consumption as at present.

In the departments where the revenue on foreign liquors is farmed out, the farmer may import those which are needed for the respective section on the payment of customs duties. The Government will return these duties to the farmer when he proves that the said liquors have been consumed in the territory where the revenue has been farmed out to him.

The only hides which may be exported are those which remain in the possession of the agent of the administration, after having sold to those engaged in that trade all they may need at the prices fixed by the ministry of finance and treasury for each department, according to local conditions.

CONSULAR CERTIFICATES.

NEW RULES FOR CONSULAR CERTIFICATION.

Copies of decrees recently issued by the Colombian Government concerning consular certificates, duty on imported salt and wines, and prices at which hides shall be sold to the owners of tanneries, were received from Mr. Snyder from which the following is taken:

For the purposes of certification of bills of lading in the consulates, 1,000 kilograms (2,204.6 pounds) will be considered as a package when treating of materials of construction, such as tiles of marble, rock, brick, wood, and mineral coal; other merchandise will pay the fees as fixed to-day for the weight of a package—that is, 80 kilograms (176.4

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pounds). Animals of great size, as horses, cows, etc., will be considered each one as a package.

Invoices mentioning only gold coin of a fineness of not less than 0.900 are exempted from the payment of the consular certification fees. It is understood that said moneys should always be accompanied by the invoice and certification of the respective consul.

SALT DUTIES.

The Colombian Government reserves to itself the right to dictate all formalities and duties connected with the importation of foreign salt into the national territory, without prejudice to the departments, which, according to law 61 of 1905, may establish a revenue from the salt needed for sale.

DUTY ON WINES.

In accordance with article 1 of decree No. 485, of the 20th of May last, dry alcoholic wines in pipes, barrels, and bottles will pay 20 cents gold per kilogram (2.2046 pounds) plus the 70 per cent surtax established by decree No. 15, of the 27th of January last.

Dry alcoholic wines shipped from the port of embarkation before the 26th of the present month (July) will not be subject to the foregoing duties, but will pay the former duties.

The administrators of the custom-houses, in order to verify the liquidation of the said import duties on wines, will take into consideration the date appearing on the certified commercial invoice.

PRICES FOR HIDES.

All large hides shall be sold to the owners of tanneries at the rate of $16 gold the hundredweight and the small hides at the rate of $12 per hundredweight. These prices refer in both cases to dried hides, as the difference in weight must be deducted from the fresh article, based on the prices fixed for the former.

The salts and hides administered by the Central Bank are the property of the Government, and consequently exempt from all national, departmental, and municipal taxes.

INCREASED DUTIES IN ICELAND.

Minister O'Brien, of Copenhagen, Denmark, furnishes the Department of State with a copy of an act of the Icelandic Parliament relating to an increase of duties on imports, which became effective August 1, and which is as follows:

Any dues paid to the Icelandic treasury on imported goods according to the customs rules and regulations for Iceland of November 8, 1901, article 1, are to be increased in such a manner that the dues stipulated in the above regulations are to be paid, with an addition of 30 per cent. No fee is to be paid on this extra percentage, and with respect to the payment of this latter the rules and regulations in the aforesaid act of Parliament are to be followed.

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NEW VENEZUELAN TARIFF.

Mr. W. W. Russell, minister to Caracas, writes that the new Venezuelan tariff is the same as the last one in force, with the exception of a few unimportant changes in classification. Article 13 is important and, translated, reads as follows:

"The executive power is hereby authorized to increase up to 25 per cent import duties on merchandise coming from those foreign countries which have not in their treaties with Venezuela the most-favored-nation clause."

HAITI.

NEW CUSTOMS REGULATIONS.

IMPORTANT CUSTOMS CHANGES—ADDITIONS TO FREE LIST.

Vice-Consul Battiste, of Port au Prince, has forwarded a copy of the customs laws as modified by the late legislature of Haiti. It is noted, as an encouragement to sailing vessels, that they are exempted from gross-tonnage duties, thus placing them on the same footing as steamers. Following is an abstract of the modified law:

All merchandise shipped from a foreign port to a port in Haiti must be accompanied with a bill of lading. The captain, for that part of the cargo that belongs to him, is not exampted from this formality.

The bill of lading shall indicate the names of the shipper, captain, and vessel, the name and address of the consignee, the tonnage of the vessel, the port of departure and of destination.

It shall state the rate of freight, the kind, the gross weight or the measurement of the merchandise, and shall present in the margin the mark and number of the packages.

The bill of lading shall have a consecutive number that shall be repeated on the consular manifest, and the consul shall keep a register wherein he shall enter this number, in connection with the name of the shipper and of the consignee.

Each package shall bear distinctly the initials of the consignee and a number.

The consul shall refuse to visé all bills of lading that indicate the same number for one or more packages.

The want of a bill of lading shall incur a confiscation of the merchandise.

The invoice is obligatory for all merchandise shipped to Haiti. It shall be made out in quadruple original, and viséed by the consul of Haiti at the port of shipment, or by a sworn officer in places where there is no consul.

This invoice shall indicate the marks, countermarks, and numbers of the packages, their number, the detailed contents of each one, the price of the goods, the freight, the charges, and the name of the port of shipment. It should be the literal reproduction of the shipper's books.

If the merchandise is consigned to order, the name of the consignee shall be replaced by the mention of "to order."

The want of an invoice will incur the sending of the merchandise to exportation.

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In case of a dispute between the shipper and the consignee the invoice viséed by the consul only will be admitted as evidence.

The manifest shall indicate, the name of the vessel and of the shipper and consignee, the marks, countermarks, and number of packages, the number and measurement of each one, the kind of merchandise and its weight, the ship's provisions should, under penalty of confiscation, be entered on the manifest.

The captain shall be obliged to declare on the manifest before submitting it to the customs authorities the packages entered on the bills of lading that may not have been embarked or that may have been thrown overboard during the voyage, in default of which he shall be liable to a fine of 500 gourdes, current money.

The packages not embarked and duly declared may be embarked on another vessel, on the manifest of which mention shall be made that they were not embarked on the vessel on the manifest of which they had been entered.

The four copies of the manifest for steamers are required for each port of destination.

The want of a manifest shall incur on the part of the captain (1) a fine of 500 gourdes if the vessel is in ballast and (2) of 1,000 gourdes if the vessel is with cargo.

All steamers may leave immediately after discharging or taking on cargo. All sailing vessels should before leaving port be furnished with a clearance delivered by the custom-house.

The agents of steamships and consignees of vessels are responsible for the signal, pilotage, sanitary visits, fountain, tonnage, and changing port dues, which shall be collected conformable to the present law, as well as those that may concern the vessel.

The tonnage due is $1, gold, without prejudice to the additional dues, per ton of merchandise imported by steamers or sailing vessels.

Sailing vessels with cargo or in ballast shall not pay gross tonnage dues.

The tonnage shall be determined by means of the weighing or the measuring that may have served to regulate the freight.

The legal ton is of 2,000 pounds weight or of 42 cubic feet, French measure.

The following articles are exempted from import dues: Animals, apparatus and accessories for bee culture, articles exempted from customs taxes through a contract with the State, books by native authors, churns, harrows, maps by native authors, plows, sugar boilers, personal effects of diplomatic agents, garden seeds, clocks for churches and public buildings, newspapers in sheets and bound, machinery of all kinds and their accessories for working the soil or for the products of the country, for industries, or facilitating same, mills for sugar cane, hulling coffee, preparing cotton and corn, plans of cities and others by native authors, fire engines and accessories, family portraits, hydraulic and cotton presses, hydraulic wheels, and leeches.

Exportation is prohibited of the following: Animals, silver in lingots or bars, gold in lingots or bars, national money of silver, bronze or nickel, materials of gold or silver.

Export duties are prescribed upon nearly all articles and commodities that are the product of the soil, which include woods of every description, coffee, hides and skins, etc.

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TRANSPORTATION.

GREAT BRITAIN.

USEFUL AUXILIARY SERVICES.

MOTOR CARS SUPPLEMENT RAILWAYS—ELECTRICITY COMPETES WITH STEAM.

Consul Marshal Halstead, of Birmingham, transmits the following interesting information concerning British railway auxiliary services:

With railway working in Great Britain there are many auxiliary services, and since the advent of the motor some new forms of services have been introduced. The British railways have always run hotels, restaurants, omnibuses for family parties, parcel (express) service, and have always had their own trucking departments for collecting and delivering freight. A number of them now have rail and road motor vehicles. One railway company has a light-parcels delivery automobile van (motor express wagon). Another has a gasoline driven rail car, which is the invention of an American, the engine equipment being all below the floor, and giving as clear a floor way as an ordinary railroad car or electric street car. One railway official anticipates this type of car will be used not only for local services between small towns and for urban and suburban purposes, but for fast express work between principal cities.

A number of the railways are running steam motor cars, one of them utilizing old tank locomotives, building onto them a body of a car and a four-wheeled truck in the rear. In repainting, the tank engines are paneled to correspond with the rest of the car body. Motor Traction, in a recent number, has an article dealing with the variety of enterprises in the nature of rail and road motor vehicles with which the Northeastern Railway are working and experimenting.

This road has a gasoline-electric rail motor vehicle in which an 80-brake horsepower gasoline motor, driving a dynamo, develops electricity which, through electric motors, is the driving power at the axles; electricity is also used for lighting and barking purposes. The 4-cylinder horizontal water-cooled gasoline engine is placed in a compartment in the front of the car, but can be operated with almost equal facility from the rear by the means of a duplicate throttle lever. The dynamo is driven at a normal speed of 420 revolutions per minute. The electric current, passing through two controllers, is led to two motors underneath the car on the front truck. Without the use of change-speed levers the controllers give varying speeds up to a maximum of 35 miles per hour. These gasoline-electric rail cars, according to Motor Traction, have been worked for a considerable time between Scarborough and Filey. The company also has three passenger road motor services and a motor charabanc (sight-seeing "brake")

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service. The road motor vehicles of the company (omnibuses, charabancs, and express and heavy freight wagons) are driven by a variety of motors, which variety of services will give the officials of the railway invaluable data for future construction. They have two steam chain-driven omnibuses, one of which has been running satisfactorily since April, 1904, and they have three 24-horsepower 4-cylinder gasoline omnibuses. They also have a motor parcels delivery van, or motor express wagon, with a maximum speed of 12 miles per hour, using a 2-cylinder gasoline engine, and they are experimenting with a large freight road vehicle driven by steam.

Motor Traction also reports that the Italian Government passed a law last year to encourage the organization of public services by automobile industrial vehicles, and provincial officials have authority, under certain circumstances, to grant 500 francs per kilometer ($96.50 per 0.62 mile) per annum for motor vehicles used for the transportation of passengers, baggage, and freight; 400 francs ($77.20) for vehicles carrying passengers, baggage, and small parcels, and 200 francs ($38.60) for those carrying freight only. It says that competitive trials will soon be held for those who wish the grants, and at the trials money, medals, diplomas, and other prizes will be given to successful competitors.

COMPETITION OF ELECTRIC ROADS.

The chairman of the Great Eastern Railway, at its eighty-sixth half-yearly meeting, complained of the competition of electric railways, and accounted for the reduction in coal traffic not only to the general depression in trade, but to the growing use of gas stoves in place of open grates burning coal. As an example, he mentioned that in Norwich there were no fewer than 16,000 of the 22,000 houses in that city fitted with gas stoves and that the number was growing at the rate of 80 to 90 per week. But for these gas stoves these houses would be consuming, he said, an annual average of three tons, which would total 48,000 tons, and the loss to the company in receipts from that source alone was nearly £10,000 ($48,665). There would also be additional competition, as a plant was being laid out for the generation of water gas.

The Times calls attention to the fact that the Great Northern seemed to have suffered more than other companies by electric street-car competition. They carried 350,000 fewer passengers in York, and though they carried 400,000 more in the London district they had received less money for doing so. Of the adverse influences from which the British railways have been suffering, increased taxation demands from local authorities, war abroad, and new forms of competition, the latter the Times considers the most serious because, in order to correct it, "a graduated transformation of existing methods of haulage seems inevitable. The future is with electricity as an agent of transportation, although at present its application to long-distance traffic has not become practical. In the meantime a beginning will probably have to be made with short-distance business by providing electrical power on sections of the various systems. Several companies have been trying more or less successful experiments with motor cars on short lengths of line, a measure which may be regarded as a half-way house to the use of electricity. It seems to us that in large cities served by

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more than one company whose directors are turning their minds to this problem it would be well, if possible, to work together, by erecting joint power houses, the cost of supplying current on a large scale being less than when it is produced in smaller quantities. No difficulty has been found in erecting joint stations in Nottingham and elsewhere with capital guaranteed by the companies concerned, and the principle could surely be applied to joint electrical works."

The chairman, at the half-yearly meeting of the Midland Railway Company, also explained that there had been fewer short-distance passengers in consequence of electric street-railway competition, which is very keen.

ENGLISH V. AMERICAN SYSTEMS.

Consul Halstead also transmits the following notes of the proceedings at the half-yearly meeting of the London and Northwestern Railway Company, covering the results of the visit of representatives of the company to the recent railway convention held at Washington:

The chairman announced that, following the usual practice of sending officers to any country where there was any possibility of learning anything of value to the company, four of their officers had visited the United States and attended the railway conference at Washington this year. Two of the directors, taking advantage of the opportunity, had made an extended tour to see American railway methods of management and accounting for themselves, but both directors and officers returned satisfied that, although there was much to study and admire in American methods, which were well adapted to the large wholesale traffic in an immense country like the United States, they were not generally applicable to the comparatively short distances and retail trade in Great Britain. The directors and officers returned confirmed in the views already expressed by all those who had previously been sent to America by the company with regard to the usefulness of ton-mile statistics for the varied irregular traffic in this country.

While Lord Stalbridge may be right in maintaining, in opposition to Mr. Burdett-Coutts, M. P., that ton-mileage statistics are of no value to the London and Northwestern Railway, the latter gentleman probably congratulates himself that it was his argument of a few years ago, that the American type of ton-mile statistics, if kept by the London and Northwestern Railway, would disclose the necessity for building larger engines and larger freight cars and the seeing to it that they were well loaded, and his continued agitation on the subject, which enabled Lord Stalbridge to state, as he did at this meeting, that there had been a satisfactory decrease in the working expenses and an increase in the tonnage of merchandise and minerals, owing to the provision of larger engines and the continued efforts of the railway company to increase the paying load per wagon (freight car) and per train. He said in locomotive power there had been a saving of £30,762 ($149,703), partly owing to the dimunition in miles run by engines. He accounted for a large saving under the head of repairs and renewals to engines to the fact that consequent to working and continued saving in train mileage they had a much larger number of engines released from traffic, and this had afforded an opportunity for overhauling them, so that the company was benefiting not only by the saving in expense, but by having so many more thoroughly effi-

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cient engines to work their traffic. He added they were still continuing to build the larger class of freight cars in place of the smaller ones when the latter came in for renewals. In fact, though the chairman did not acknowledge the fact, it would appear that in recent years the London and Northwestern Railway has adopted a good many of the best points in American train management, particularly larger and more powerful engines, larger freight cars, and the provision of full loads for them, American statistics having shown the advantages, without the expense to his company, of having ton-mile statistics.

RESULT OF OPERATIONS LAST YEAR.

Consul Liefeld, of Freiburg, Germany, transmits the following interesting returns of British railways for 1904, compiled from the Paris edition of the London Daily Mail:

The capital invested in British railways amounts to $6,173,155,250, of which $939,234,000 were credited to consolidations, conversions, and divisions of stock.

During 1904 there was an increase of $37,715,375 in the ordinary, $45,015,125 in the guaranteed and preferred, and $31,632,250 in the loans and debenture stock, making a total increase of $114,362,750.

The average dividends paid on the various classes of capital in 1904 were practically the same as in 1903, with the exception of the rate of interest on loans, and were approximately 3¼ per cent on the ordinary capital, 3½ per cent on the preferred, 4 per cent on the guaranteed, and 3½ per cent on the debenture stock. The rate of interest on loans, which reached the high figure of 4.46 in 1903, fell to 4.11 in 1904, or much the same as prevailed previous to 1903. These rates are naturally lower than they would have been had there been no "nominal additions" to the capital of the companies.

The average rate of dividend or interest computed on capital as it would have stood if no nominal additions had been made was 4.08 per cent, as compared with the rate of 3.42 per cent paid. In like manner the proportion of actual net earnings to capital, exclusive of the amount of nominal additions, is 3.97 per cent.

TRAFFIC AND GROSS RECEIPTS.

The gross receipts in the two years were as follows:

Source of receipts.	Receipts.		Increase.	Decrease.
	1903.	1904.		
Passenger traffic:				
First class	$17,179,011	$16,687,228	.....	$481,783
Second class	16,215,179	15,889,123	.....	326,056
Third class	142,457,055	142,987,503	$530,448	.....
Season tickets	18,745,758	19,417,335	671,577	.....
Excess of luggage, mails, parcels, etc	40,334,136	40,499,013	164,877	.....
Total	234,931,139	235,480,202	559,063	.....
Goods traffic	268,144,150	269,604,100	1,459,950	.....
Grand total	503,075,289	505,084,063	2,019,013	.....

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The numbers of passengers carried and the increase and decrease as compared with 1903 were: First class, 34,931,000, a decrease of 138,000; second class, 71,294,000, a decrease of 2,697,000; third class, 1,092,549,000, an increase of 6,344,000; total, 1,198,774,000, an increase of 3,509,000.

The average receipts for each passenger was: First class, 47 cents; second class, 22 cents; third class, 13 cents. The average receipts for each second-class passenger was 4 cents more than in 1897, the other classes remaining stationary.

The increase in the number of third-class passengers was rather greater in 1904 than in 1903, but it was still small as compared with the annual increases shown by the returns for years previous to 1902. This is due to the increasing competition of tramways. The number of tramway passengers carried last year was 1,799,343,000.

Including $38,932,000 received from steamboats, canals, hotels, and other sources, the total gross receipts in 1904 amounted to $544,016,063 and the total working expenditures to $336,630,404.50, leaving the net receipts $207,385,659, against $205,984,345 in 1903. The proportion of net earnings to capital was 3.36 per cent. The final result of the year's working is that there have been small increases in gross receipts, working expenses, and net earnings, but that owing to the simultaneous increase in capital the percentage borne by net earnings to total capital shows a slight decline.

REDUCED RATES.

LOW FARES ARE FAVORED FOR SPECIAL TRIPS.

Consul Mahin, of Nottingham, reports reduced fares on British roads. He says:

Regular passenger fares on British railways are not absolutely uniform on all roads for similar distances. First-class fare ranges from 3 to 4 cents a mile, second-class is about 2½ cents, and third class about 2 cents. Distance cuts little figure in the rates except where several lines compete for business between two important points—London and Liverpool, for instance—when the longer routes make their fares the same as those of the shortest route. First-class accommodations are better than those of the ordinary American day coaches, but hardly equal to those of our drawing-room or parlor cars. The first-class compartment is more expensively upholstered and more roomy than the second and third class. Usually it is arranged to seat only 6 persons; the other classes 8. The first-class is comparatively little used, and then chiefly by persons who want seclusion or who ride on passes or season tickets. The familiar remark that only royalty and Americans travel first-class in England is hardly pertinent now. My own observation is that Americans generally ride second or third class. Both are sufficiently comfortable, and are seldom crowded, long trains being uniformly run, and Americans (excepting the uninitiated on their first visit) generally consider it a mere waste of money to buy first-class tickets.

The second and third class compartments are both upholstered, contrary to the continental system, where third class means a plain wooden seat. The casual glance sees no difference between the Brit-

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ish second and third class, but the second has a better quality of upholstering. Some of the railways have, however, dropped out the second class, and use only first and third, the second being so little used. None of the railways traversing this consular district provide the second class. Nearly everybody rides third class. It is essentially as good as an ordinary American day coach, and therefore the fare of about 2 cents a mile is lower than the usual fare in the United States.

LOW EXCURSION RATES.

But the multiplicity of special excursion and week-end rates makes it possible to travel almost anywhere, at almost any time, for a fraction of the regular fare. These low rates usually apply to only the third class, in this locality, but sometimes are extended to the first, when one may travel first-class at less than ordinary third class fare—that is, for less than 2 cents a mile in a compartment nearly equal to the American Pullman or parlor car. For instance, the regular fare from Nottingham to Skegness, a seaside resort 73 miles distant, is $2.37 first-class and $1.50 third, one way. Round trip week-end (from Friday to Tuesday) tickets cost $1.94 first-class and $1.21 third, or 1⅔ cents a mile first class.

Every week one or more special attractions in London give occasion to offer low excursion rates, and in addition, every Saturday round trip reduced rates are given on one-half day up to six day tickets. The regular third class fare from Nottingham to London, 125 miles, is $2.49. The special round trip fares are $1.03 for half a day, $1.82 for one day, $2.31 for two days, $2.67 for five or six days, and $3.40 for eight days. Only the half-day tickets are limited to special excursion trains. The others are good on ordinary trains. Most local people who can arrange to return within the time limit go to London on these tickets. As would naturally be expected, people who do not intend to return often buy day or half-day tickets because they are cheaper than the regular one-way fare, and sell or give away the return coupon in London; but in spite of this the railways evidently find advantage in continuing such rates.

ACME OF CHEAP TRAVELING.

Similar reduced fares are constantly being given to both near-by stations and distant points on the islands, and for the round trip are less or little more, depending on limit of ticket, than the regular fare one way. In short, if the traveler can suit his convenience to the particular days of the week when reduced rates are given, and to the trains, of which there is often a choice of several, he need never pay more than half the schedule passenger tariff on English railways. The acme of cheap traveling in this country was reached this summer. Once or twice each week railroads give excursion rates from London and provincial towns to seaside resorts which range from 5 to 9 miles for a penny (2 cents). These are not on slow way trains, made up of obsolete cars, but on fast "expresses," some being nonstop and composed of new corridor cars. Taking account of all these reduced fares, it is probable that English railway travel is the cheapest in Europe; and, withal, the English railways and their service are inferior to none.

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ELECTRIC SIGNALING.

A NEW DEVICE TO PREVENT ACCIDENTS.

An automatic danger-signaling apparatus, to be used on railways, has been invented by an Englishman. Consul Mahin says that, theoretically, the success of the new device is not doubted. Its practicability is questioned, however, because it may lead to carelessness on the part of those in charge of the trains. He writes:

A resident of Nottingham has invented a system of electric signaling on railways, of which the principle, at least, its friends believe, will be eventually adopted by the railways. By an ingenious plan, when danger or the necessity of proceeding cautiously is signaled a gong would sound on the engine and an immense "bull's eye," on the cab, glare with red or green light in the driver's face. Even the densest fog, that greatest peril to English railways, would thus be robbed of its danger, provided there was no failure in the apparatus or supply of the electric current. Beyond the spot where, at present, the distant signal is located on the railways the invention proposes that a central rail 100 yards in length should be laid, with a second and much longer central rail near the present home signal. Connected electrically with the signal box, the pressure of a roller beneath the engine on these central rails would not only ring a bell and cause a lamp (corresponding with the track upon which the train was running) to glow in the signal box, but bells would ring, and red or green lamps glow on the engine itself, the color of the lamp depending upon which rail (the right or left) the signalman had converted into a negative.

THEORY SOUND, BUT PRACTICE DOUBTFUL.

The theoretical soundness of the invention is not questioned, but doubts of its practicability are expressed. Engineers, it is feared, would lose alertness and rely absolutely upon the gong; and should the apparatus fail to work, hideous results might follow. Besides, the expense of proper generating stations would presumably be enormous. But the idea of electric signaling is in favor in railway circles, and this invention is a step toward its effectuation.

Several years ago another Nottingham inventor devised a scheme for electric signaling, and constructed a model train and track to illustrate it. A copper-wire brush projected from each signal box. When the signal was placed at danger the brush caught upon a strip of copper extending the whole length of the model train, and caused a gong to ring on the engine and in the "brake van" at the end. The model worked perfectly. Railway experts watched it, but somehow doubted the reliability of the scheme. One railway took somewhat kindly to it, but only offered to place a branch line at the inventor's disposal for experiment, he to install the system at his own expense. This he was unable to do, and his invention rests in abeyance.

The dense fogs in winter and the attendant expense of employing extra men and means to avert disasters make the need of automatic signaling on English railways peculiarly imperative. Any practicable and relatively inexpensive system better than the methods now in use would be welcomed by them.

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NEW ROUTE.

QUICKER SERVICE WITH IRELAND.

Consul Moe, of Dublin, reports plans for a new short route between England and Ireland. He writes:

The Irish Independent, quoting the London Evening News, says that shortly travel will be revolutionized between the south of Ireland and English points below Holyhead. It says: "We have been watching with no little interest the developments that have been taking place for some time past in regard to Fishguard Harbor and Rosslare, and this route, once an up-to-date service in actual swing, is expected to shorten the distance between the two countries in some cases by as much as a hundred miles. Then the new development aims at more, for we are told the ulterior motive behind the works is that the new harbor at Fishguard, on which so much money has been and is being spent, may be secured as a terminal port for Atlantic mails and passengers. Ever since 1898," says the Evening News in relating the history of the scheme, "works on a very large scale have been in progress within the bay of Fishguard on what is now the remote North Pembrokeshire coast for the purpose of converting it into a great new harbor for Anglo-Irish traffic.

"The Great Western Company have long owned a boat service between New Milford and Waterford and Cork, and in 1898 they entered into an agreement with the Great Southern and Western Railway of Ireland to improve the existing means of communication between England and the south of Ireland. Under this agreement the English company were to construct a new harbor at Fishguard, which would obviate the delay such as is now experienced at New Milford by the passage of an estuary, to improve its route thence, and establish a line of fast turbine steamers to Rosslare, on the Wexford coast, only 54 nautical, or 62 statute, miles distant. Then the Irish company were to improve Rosslare Harbor, build a new direct line, 38 miles in length, from Rosslare to Waterford, and carry out several important deviations on its railways beyond."

Should these plans mature, it is not impossible that the traveler may breakfast in London and dine on the shores of Killarney.

EUROPEAN CANALS.

Consul Mahin, of Nottingham, England, calls attention to a movement in Europe to revive interest in canals or in land waterways of all kinds. He cites the deplorable situation in England. He writes:

Time was when the canal system of England was considered the best in the world. Now it is deplored as the worst.

Its decline was simultaneous with the rise of the railway. The best of the canals were bought by the railway companies and made inoffensive appendages—bought cheaply, too, so that, being utilized for certain classes of freight, they do not represent anything in the nature of "watered stock."

Though but 1,264 of the 3,936 miles of canals in Great Britian are owned by the railways, the fact that the cream of the system has been thus absorbed has apparently taken all life out of the larger portion remaining in other ownership. Of this major part 415 miles are abandoned. Of the entire system only about 230 miles are capable of

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admitting boats carrying over 90 tons, about 2,000 miles will accommodate boats carrying 40 to 60 tons, while the remainder are fit only for small barges carrying up to 30 tons.

Invidious comparison is made with the waterways of France, Germany, Belgium, and other countries. Continental canals will, it is claimed, carry barges of 250 to 500 tons capacity, and even larger; and that these are not more expensive to operate than the English barges, because a small one requires as many men to look after it as a large one. We are told that France has 7,000 miles of State-owned and toll-free canals, upon which it spent $200,000,000 in the past twenty-five years, and has schemes in hand for spending $100,000,000 more. Germany has spent $105,000,000 on its 9,000 miles of canals in ten years, and Belgium $80,000,000 on its 1,400 miles in the last twenty-five years. Austria-Hungary is about to expend $150,000,000, and Italy has large projects in contemplation to make her canals more perfect.

The dream of Russia is to build a system of canals that will put the Caspian and all the country near it in close communication with Europe by way of the Black Sea and the Mediterranean. This is to be done by uniting the Volga with the Don near Tzaritsin. Another of her gigantic canal schemes, long projected, is to unite the Baltic by means of the Gulf of Riga with the Black Sea. This is to be effected by joining the waters of the Dnieper with the Duna; still another is to unite the Gulf of Finland, a bay of the Baltic, with the White Sea, cutting a canal via lakes Onega and Ladoga.

These statements are being so pressed home by writers in English periodicals that the business interests are now convinced that something must be done, and it is practically certain that measures will be introduced in the next session of Parliament to place the British canal system beyond the reach of invidious comparison.

MANCHESTER CANAL.

Consul-General Bradley sends a clipping from the Manchester Guardian which gives the record of traffic on the Manchester Canal for a term of years. The following table gives for each year of the existence of the port of Manchester the number and total tonnage of vessels entered from foreign and colonial ports, together with the average tonnage per vessel:

Year.	Number of vessels.	Net registered tonnage.	Average per vessel.
1894	402	201,105	500
1895	575	317,625	552
1896	733	480,627	655
1897	667	516,837	775
1898	684	576,792	843
1899	715	682,517	955
1900	782	787,497	1,007
1901	762	758,670	996
1902	859	911,372	1,061
1903	886	1,024,802	1,157
1904	862	1,036,172	1,202

Manchester is now in connection with all parts of the world. The list of the places whence the ships come to her docks and whither those that leave them go includes every important port, for although Persia does not appear on the shipping lists of the city, it has regular and frequent sailings to the Persian Gulf.

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GREECE.

RAILWAY SYSTEM EXTENDED.

COMMENDABLE PROGRESS MADE IN CONSTRUCTION.

Mr. Charles S. Wilson, secretary of legation at Athens, makes an interesting report on the railways of Greece, which follows:

In 1896 there were 949 kilometers of railway in operation in Greece, as follows:

1. Athens-Piræus line, 10 kilometers, connecting Athens with its port.

2. The Peloponnesus line, 574 kilometers, between Athens and Patras, by way of Corinth, where a branch line goes to Argos, Nauplia, Tripoli, and Kalamata. Another branch leads from Pyrgos to Olympia.

3. The railways of Thessaly, 267 kilometers, starting from Volo and passing through the principal towns of Thessaly, Larissa, Pharsala, Tricala, and Kalabaka.

4. Railway of Attica, 74 kilometers, belonging to the Greek Laurium Company, and connecting Athens with the mines of Laurium.

5. Pyrgos-Katakolo, 13 kilometers, a short line connecting Pyrgos with its port.

6. Northwestern line, 61 kilometers, passing through the districts of Acarnania and Ætolia, and connecting Missolongi with Agrinion and Kyroneri.

The Peloponnesus and Thessaly lines are the only ones which have increased in length, the former by 176 kilometers and the latter by 22 kilometers. The earnings of all the companies except the Pyrgos-Katakolo have increased. This latter has felt the effect of the crisis in the dried-currant trade, that fruit being its principal source of income. The other companies have suffered less from this cause, but there is no doubt but that the Peloponnesus company has also been affected.

INCREASED EARNINGS.

The line showing the best results between 1896 and 1904 is that of Thessaly, where the earnings per kilometer have increased from 8.075 to 10.350 drachmas, and the percentage of the expenses to the earnings has decreased from 60.6 to 36.3 per cent. (A table is furnished giving the earnings and expenses in detail from 1896 to 1904.)

Between these two dates the percentage of earnings has increased by 16.83 per cent per kilometer, while the expenses have increased by only 10.42 per cent, which has reduced the proportion between the two from 57.6 to 54.5 per cent.

The most important event in connection with the Greek railways since 1896 is the reorganization of the "Société des Chemins de Fer Helléniques." In 1890 the Greek Government, having decided on the construction of a railway from Athens to the Turkish frontier, which should connect Greece with the railway system of Europe, made a loan of 60,000,000 francs at 5 per cent, actually receiving, however, only 52,500,000 francs. Of this latter sum only about 22,000,000 was used

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for railway construction, and the balance was employed to make up the annual deficit in the treasury, and finally all work was abandoned. In 1899 the Greek Government decided to make another attempt, and after long negotiations signed in 1900 an agreement with a group of French and English capitalists for the construction of the line. For this purpose the Government issued 4 per cent gold bonds, which the International Financial Commission assumes to pay the interest and principal at par in ninety-eight years from the surplus of the revenues set aside for the commission's use. On December 31, 1904, there were 98,850 of the obligations in circulation, representing 49,425,000 francs.

EUROPEAN CONNECTIONS.

This line, which will have a length of 348 kilometers, starts from Piraeus, passing through Athens, Thebes, Livadia, with a branch to Calchis. It will be of great economic value to the country, for by it Greece will be connected with the European railway system, making the country much easier of access to travelers, and it is also expected that it will become the direct mail route from India instead of by Brindisi as at present. Furthermore, the line will pass through Attica, Beotia, and Thessaly, the most fertile provinces of Greece, and by means of branch lines will open up the country to agriculture and industry, which until now has been impossible from lack of means of transportation. The railway is already open from Athens to Dadi, passing through Thebes and Livadia, with the branch to Calchis, comprising in all 203 kilometers, and is being rapidly pushed forward.

The road is said to be well constructed and capable of carrying the international trains at the rate of 50 kilometers an hour. From March, 1904, to the end of February, 1905, 176,000 passengers were carried, and the net receipts were 1,463,360 drachmas. It is probable that when the line is finished, in about two years, its earnings per kilometer will be greater than that of other Greek lines.

CAPITAL INVESTED.

In 1896 the capital engaged in Greek railways was 76,775,700 drachmas in stock and 22,188,150 in bonds, or a total of 98,963,850 drachmas (not including the loan of 60,000,000 for the Piraeus-Larissa line). On the bourse of Athens this capital represented only 47,589,325 drachmas (27,993,720 francs) on December 31, 1896. On December 31, 1904, the capital of the same companies was 57,695,800 drachmas of stock and 22,977,300 in bonds, a total of 80,672,800 drachmas. In spite of this decrease in capital the value on the bourse at the above date was 66,526,400 drachmas, an increase of 18,937,075 drachmas since 1896. In this connection, however, it should be mentioned that the above figures do not include the loan of 50,000,000 francs for the Piraeus-Larissa Railway nor the paid capital of the same company; nor does it include the loan of 11,750,000 drachmas contracted by the State in 1901 for the Pyrgos-Melegala line. The International Financial Commission guarantees both these loans, of which the amount outstanding on December 31, 1904, was 49,425,000 francs, and 11,700,000 drachmas respectively.

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BOLIVIA-CHILE.

AN INTERNATIONAL RAILROAD.

PROPOSALS FOR CONSTRUCTION INVITED—TERMS AND SPECIFICATIONS.

Mr. Edward W. Ames, secretary of legation at Santiago, furnishes a copy of the decree recently issued by the Government of Chile regarding an agreement entered into between Chile and Bolivia for a railroad from Arica to La Paz, and inviting bids for its construction. Following is an abstract of that portion of the decree which invites bids for the construction of the road:

ARTICLE 1. That bids be called for for the construction, at a fixed price, of a railroad with one meter gauge to unite the port of Arica with the plateau of La Paz and with branches to the sulphur deposits of Tacora, the mines of Coro-coro and the port on the river Desaguadero. As for the branches, their cost shall be stated separately and the Government reserves the right to exclude from the proposals one or more of them. The bidders may adopt the line proposed by the engineer, Mr. Josiah Harding, or any other which, having been by them presented, shall be accepted by the Federal Government, and the bidders shall be bound by the terms of contract approved by it.

ART. 2. Payment for work completed shall be made in quarterly installments, 10 per cent of the amount of each installment being retained as a guarantee of the State's securing good construction and a line easy of operation.

For the purposes of making over the 10 per cent retentions, the total length of the line shall be divided into three sections, three of which shall consist of that part of the line constructed in Chilean territory and two of that part situated in Bolivian territory.

As regards the first three sections, the payment of the 10 per cent retentions shall be made for the three together in two equal payments, the first half on the provisional acceptance of said sections, the second, one year after they have been in operation. The payment of the 10 per cent retentions on the other sections shall be made in the same way for each of them separately.

GUARANTEES FROM BIDDERS.

ART. 3. The bids shall be accompanied by a certificate of deposit for £50,000 sterling to the order of the Government of Chile, as a guarantee of good faith, and this sum shall be forfeited to the Treasury if the bidder does not sign the proper public form of contract within the thirty days subsequent to the acceptance of his bid. The bidder whose bid shall have been accepted shall increase this deposit by £50,000 on signing the contract, and this total of £100,000 shall be added to the 10 per cent retentions for which the previous article provides. These deposits may consist, originally or by subsequent substitution, of mortgages of the Mortgage Bank or other similar institutions which the President of the Republic shall elect, or in bonds of the public debt of Chile, valued at the current market price, the interest on which the contractor shall receive.

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ART. 4. To the bidders whose bids are not accepted their certificates of deposit shall be returned. In the case of the accepted bid, the deposit of £100,000 guarantee of contract shall be returned as follows: One-third on the definite acceptance of the first three sections, the second third on the definite acceptance of the complete work, and the balance one year after the whole line has been delivered to traffic.

ART. 5. The use of such Government lands as he may need for the railroad and its stations and offices, as well as the use of the public roads, is granted the contractor, provided that the traffic be not hindered by such use. He is also granted, on the same condition, the right to use, gratis, all spring water necessary for his engines and stations and the motive power of the rivers all along the line, with the sole object of operating his installations and engines and without detriment to rights acquired previous to August 15, 1905.

ART. 6. Such privately owned lands as are necessary for the establishment of the line, stations, offices, and other dependencies of a railroad line are condemned by right of public domain during the period of constructing the railroad. The cost of such condemnations shall be borne by the contractor, who shall, moreover, set about effecting them in conformity with the legal or executive dispositions of the country concerned.

ART. 7. The engines, cars, and other materials necessary for the construction of the road and its stations, offices, and docks and the equipment necessary for the delivery of the line to the public service shall be declared free of import duties, and of all federal and municipal taxes.

ART. 8. The contractor shall be obliged to respect the agreement of the Government of Chile with that of Bolivia concerning the construction of the railroad line.

ART. 9. The bidders must give the name of the capitalist or capitalists on whom they count for support in carrying out the work.

ART. 10. The administration of public works shall supervise the construction of the railroad and shall see to the faithful fulfillment of the contract.

PRIVILEGES FOR CONTRACTORS.

ART. 11. The contractor and the persons or companies who represent his rights, even if they be foreigners or do not reside in Chile, shall be considered as having a civil domicile in Santiago, Chile, and shall be subject to the country's laws as if they were Chilians in whatever concerns the fulfillment of the contract, it being understood that they shall, under no pretext, have recourse to diplomatic support in any difficulty which may arise because of said contract.

ART. 12. The following circumstances shall be given much weight in considering the acceptance of a bid:

(*a*) The lowest price at which it is offered to construct and equip the railroad.

(*b*) Conditions which, in the opinion of the administration of public works, render its construction most economical and promise the the greatest stability to the work.

(*c*) The condition of receiving payment for the work in bonds of the public debt, the lowest rate of interest on those bonds, and the best price at which it is offered to receive them.

Bids will be opened January 2, 1906, at 2 p.m. at Santiago, before the subsecretary of the ministry of foreign affairs. The work of construction must begin before the 1st of March, 1906.

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CONSTRUCTION COMPANY IN HAITI.

Vice-Consul Battiste at Port au Prince reports, under date of September 27, 1905, that a concession has been granted by the Haitian legislature for the construction of a railroad from Gonaives to Hinche, and that three American citizens have joined with the Haitian concessionaire in the formation of a railroad company known as the National Railroad Company of Haiti, which has exclusive privilege of constructing and operating a railroad from Gonaives to Hinche by way of Ennery, St. Michel d'Attalaye, and Maissade, with a branch to Gros-Morne.

GERMANY.

TRAIN WARNING SERVICE.

EXPERIMENTS WITH ELECTRICITY.

An excellent device for warning trains is the subject of the following report by Consular Clerk Murphy, of St. Catharines. If it does what it is said to do, the device is one that should be adopted in all parts of the world, particularly on such lines as are now only fairly well provided with danger signals.

Much interest has recently been aroused in Germany by the success of all practical tests to which the Pfirmann-Wendorf apparatus for preventing railway accidents was subjected by the managers of the Frankfort on Main division of the Prussian State railways, experiments covering a period of several months, which proved uniformly satisfactory even under the most unfavorable conditions due to rain, snow, fog, and darkness.

These experiments were made on a specially prepared track, several miles in length, extending from Goldstein to Sachsenhausen. Each locomotive used was supplied with a small Pfirmann-Wendorf apparatus, which with its storage battery occupied a space only 20 centimeters in depth and breadth, respectively, and 30 centimeters in length. Communication between this apparatus and the two track rails was supplied by the metal parts of the locomotive through the axles and wheels, while an insulated contact device connected the apparatus with a carefully insulated auxiliary rail running midway between the track rails, the contact device being so arranged that it could easily be moved back and forth or sideways. Positive and negative impulses could thus be sent in different directions, frequent changes being made from one rail to another.

If there is an obstruction of any kind within a certain distance, an alarm is thus given, both visibly and audibly, by means of a red light and by the ringing of a bell. No matter how many locomotives there may be on the track, each gives its warnings. Engineers, signalmen, and station masters can thereupon communicate together by telephone, the central auxiliary rail serving as the channel of communication. In each locomotive there is a telephone which is protected against the vibrations caused by the motion of the locomotive through being fastened on springs like a bicycle lamp. In like manner in cases of

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sudden danger track guards can transmit a warning to the engineers of approaching locomotives.

If for any reason a storage battery becomes exhausted it can be replenished with electricity produced by the locomotive; and even if this supply fails, the current from a semaphore or signal station can still transmit to the engineer explanations and instructions. If by mistake a semaphore falsely registers "free track," the endangered trains nevertheless supply each other with signals of warning. An alarm is also given automatically when a switch is falsely set or insecurely closed.

This system requires neither wires nor poles, their place being supplied by massive and more reliable iron.

The auxiliary line, consisting of ordinary T iron, may be limited to important or dangerous portions of the track where the view is obstructed or to the vicinity of sidings, curves, bridges, and tunnels. Old rails may be utilized for the central auxiliary line. Thus the cost of even an uninterrupted line can be made exceedingly small in comparison with the value of lives and merchandise thus protected.

EDUCATED EMPLOYEES.

GOVERNMENTAL TRAINING SCHOOLS.

Consul-General Guenther reports educational efforts in Germany of a novel character. They aim to fit railway employees and others for a better technical and scientific discharge of their duties. The reports follow:

The growing transportation demands have induced several European Governments to establish schools for railway employees. Sweden now contemplates the establishment of such a school, and has sent two high railway officials to Denmark, Prussia, and Austria to study the schools of these countries. These gentlemen report that the railway school at Linz, Austria, has special courses of instruction in commerce and transportation, geography, general and commercial history, transportation statistics, railroad legislation, railroad technology, knowledge of goods, telegraphy, signal and block system, railroad bookkeeping, railroad tariffs, customs regulations. The courses in theoretical instruction lasts four years. They report the method for educating railway employees at the Breslau school as entirely different from that at Linz. In the Breslau school the education is a practical one, concluding with a short theoretical course. They consider the postponement of the theoretical instruction as entirely erroneous.

The Government of the Kingdom of Wurttemburg is planning, on a large scale, the reorganization of trade schools. Particular care is to be taken to establish trade schools for special branches of manufacture and auxiliary to the peculiar trades existing in the different districts. At present the new regulations will be applied to about one hundred towns or districts. In the cities and large towns workshops with modern appliances are to be attached to the schools for purposes of practical instruction. That Germany's future largely depends upon her manufacturing ability and the success of her export trade is appreciated by farseeing Germans; hence the empire's strenuous efforts to raise an army of skilled mechanics and operatives and a large staff of commercial travelers to sell abroad the goods "made in Germany."

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CHINA.

CONSTRUCTION DELAYS.

WATERWAYS MUST YIELD TO RAILWAYS.

Consul Anderson reports on transportation conditions in China, describes and emphasizes the value of the Empire's waterways, and shows what is possible and probable in railroad building. His letter follows:

The practical deadlock in the construction of railways in China which has existed for the past year or so, a result of the war between Russia and Japan, it has been said, is just as marked as ever now that peace is assured. As a matter of fact the war has had very little to do with the general railroad movement in the Empire. The continued delay is due to the Chinese rather than extraneous reasons, and probably represents an economic movement which is of the utmost importance to American business men. The Chinese people have no appreciation of the development of a country by railroads, although the need of some railroads in China is appreciated by them. They seem to feel that in many ways and in most places there is no need of any change. For heavy freights in some parts of the Empire this is really the case. The transportation system at the present time is illustrative of the political, social, industrial, and commercial condition of the Empire. There is not the least doubt but that the development of other countries, industrially and socially, which has always followed the development of transportation stage by stage, will be paralleled in China. More than this, it may even be said that there will be no great development of China commercially until there is an adequate system of transportation provided for some branches of its commerce. The transportation system of China at the present time is inadequate for its present needs. There are three means of transportation now in use. The first and most general is by water; the second means of transportation is by railway; the third by coolies and carts.

CARTS AND COOLIES.

The amount of goods transported in China by coolies, and in the northern portion of the Empire by carts, is beyond the belief of those who have not had occasion to investigate the subject. In the interior of the greater portion of the country coolies and canals carry all freights, and what this means can be understood to a fair degree perhaps when it is realized that there is practically no railroad service at all in the more populous and richest portions of an Empire containing 400,000,000 of people or more. In most of the Empire there are no roads worthy of the name. In the northern provinces the traffic in carts of a rough sort dominates the entire movement of goods in the districts concerned to the seaboard. Where waterways are frozen a great portion of the year this is of necessity the case, and there are roads in Manchuria, Shangtung, and several other provinces which are not to be found and for which, indeed, there is no use in the economy of the central and southern provinces. Over these roads the heavy, rough carts, drawn by horses, mules, oxen, and even men, carry immense loads, and their number is stupendous.

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OLD MUST YIELD TO NEW.

In the necessity of the trade of China in the immediate future, foreign traders agree that such methods of transportation must go. As a matter of fact, they are going very slowly, if at all. It is in that portion of the Empire where waterways are frozen much of the year that the first hold of the railroads has come. The greater portion of the Empire is served by waterways where it is served at all. Along the Chinese coast there is a series of navigable rivers coming down from the interior, a series which has few equals, all things considered, in all the world. From the Yalu and Pei-Ho at the north to West River, passing through Canton, in the south, these rivers seem to be formed to reach inland from the coast, connecting not only the coast cities with the interior cities, but the interior cities with each other by way of the coast as well. About midway between the north and south the great Yangtze reaches far into the interior, navigable almost to the western border of the Empire, and by its tributaries offering still fur ther connection with interior points. The rapids of the Yangtze have been and still are a drawback to the development of the upper portion of the Yangtze Valley. But these rapids probably can be subdued at an expenditure ridiculously small compared with the enormous benefits to follow. That this will be done in the near future and that steam navigation, regular and safe, with Chunking and the upper river will be established and maintained is beyond question. But still the Government holds back.

POPULARITY OF THE CANAL SYSTEM.

The most interesting and in some respects the most important feature of the waterway system in China, however, is the canal system. Running more or less parallel to the seacoast from Hangchow to Peking, through a very rich portion of the Empire, certainly the most important portion, commercially, to the United States at the present time, is the Grand or Imperial Canal of China. Connecting with this at either hand are smaller canals. These in turn connect with still smaller waterways, and still farther are smaller streams, until the whole Yangtze and Yellow River plains are a vast network of waterways, designed originally for irrigation very largely, but used at the present time both for irrigation and transportation. To get at Chinese commercial conditions one must thoroughly understand this system of streams and canals. It is a characteristic part of the life of the Chinese people. There will be no system of railroads to supplant it in its close relation to life here, and any commercial system or theory which disregards it will fall short of success. The rivers and waterways of the Empire are the basis for heavy transportation and traffic for years to come, and the railroad system for which there is hope will not supplant but merely supplement them.

THE WORLD'S EXPECTATIONS.

What an adequate railroad system would do for China can not accurately be measured, so great are the possibilities. The world seems to expect more from railroads than from any other element of progress, and probably in this the world will not be disappointed when once its hopes can be realized. But there is not the bright prospect in railroad

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affairs in China that there ought to be, and the indications are that there will be even worse conditions in the near future than those now obtaining. There are in operation about 2,200 miles of railroads in China; there is in the course of construction possibly 1,500 miles more. The only connection Americans have with this entire railroad situation is that now and then some one of the concerns constructing a road may buy its supplies from the United States. The American concern proposing to construct the railroad from Canton to Hankau, the only American enterprise in the list, is charged with having failed to keep its agreement with the Chinese Government and with having sold out to Belgians. China, it is said, was forced to resume the control and responsibility, and at the present time is about to sell to Chinese interests that are opposed to the construction of this great trunk line by foreigners. As a matter of fact the work will not be done except by foreigners, and to turn the enterprise over to the Chinese means that the Japanese will do the work, that the road will be Japanese, and that Japanese in the future will furnish the materials and supplies for the trunk system of China. Concessions for railroads have been granted all over the Empire. It may be said that every railroad China needs has been planned twice over and concessions for many of them are already granted. But this does not mean that the lines are being constructed or that they will be constructed. The moment that any serious work on a railroad is commenced, under a concession held by foreigners, there is opposition, delay, and finally nothing accomplished.

The general prospect for any change in the general transportation facilities of the Empire in the near future is not very encouraging. It hinges on political and social changes which will not come very soon.

JAPAN.

ELECTRIC TRAMWAYS.

OPENING OF NEW ROADS—SUPPLIES NEEDED.

Japan is already turning to electric tramways as a means of transportation. Consul Sharp, of Kobé, tells the story of a new road just opened in competition with a State railroad between Kobé and Osaka. It is sure to interest everybody furnishing railway supplies. He writes:

The opening of the Hanshin Electric Railway between Kobé and Osaka marked a great advance in electric traction in Japan, it being the first line constructed in this country to connect two large cities.

This railway is operated by the electric overhead trolley system with 1,600 kilowatts steam power, and covers a little more than 19 miles. There are in use at present 18 cars, which were made by the Nippon Sharyo Seizo Kaisha, of Nagoya, Japan, from a sample car imported from the United States. The cars are well made and have a seating capacity of about 50. The rails (T-grade) were imported from Pittsburg, Pa., and the electric motors were imported from Schenectady, N. Y.

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The line is divided into four sections, the fare on each section being 2½ cents, these being subdivided into 1¼-cent journeys. All told there are 30 authorized stopping places between the termini, stops being made only when passengers wish to get on or off the cars.

On the opening day several cars passed eight or nine stations without stopping, and the trip of nearly 20 miles was made in an hour and twenty minutes. The average time, however, is about an hour and a half—half as long again as the time occupied by the steam cars.

There has been much speculation as to whether the new competing service will not greatly affect the traffic between Kobé and Osaka, on the Imperial Government railway. Besides the difference of fare, which is 10 cents on the tram and 17 cents third class and 50 cents first-class on the steam cars, the electric cars run every twelve minutes against every hour on the steam railway, and have 30 stopping places as against 3.

On thewhole, however, it is more than probable that the new line of cars will cause a very considerable diminution in the receipts of the Government railway between these two cities.

The amount of paid-up capital in this company is $742,500.

BOOM ANTICIPATED.

The Kobé (Japan) Chronicle of recent date says that it looks as if there will be a boom in electric railways before many months are past. The Government railway passenger traffic between Kobé and Osaka has been so affected by the Hanjin Electric Railway that the imperial railway working bureau is considering the advisability of establishing an electric line between the two cities and so meeting the competition. The bureau is also considering the establishment of such a railway between Tokyo and Yokohama, and so forstalling enterprise. This competition may be bad for the railways which suffer by it, but it is all to the benefit of the traveling public. The extent of this benefit may be judged when it is considered that the business man living in Kobé, who has to make frequent visits to Osaka, by using the electric railway not only saves enormously in the amount of fare, but travels nearly as quickly. He uses the electric route at this season of the year from choice, because of its freedom from soot and smoke.

TRAMWAYS IN ASIA MINOR.

Consul Thomas H. Norton, of Smyrna, calls attention to the construction of tramways in Asia Minor, and believes that American construction companies may find business there. He writes:

The municipal authorities of Koniah have decided upon the construction of a tramway, 2 kilometers in length, connecting the city with the station on the line of the Bagdad Railway line. Specifications are deposited with the governor-general of Koniah, to whom interested parties can direct their correspondence, preferably in French. Material (purchased in Europe) is now on hand for the construction of the tramway in the island of Samos, 50 miles south of Smyrna. The projected tramway in Koniah will be the first attempt at introducing a modern urban transportation system in the interior

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of Asia Minor. The example will probably be followed by other cities, and the field is worthy of the attention of American construction companies. It is unfortunate that the prejudice against the introduction of electricity as a motive power still continues in Turkey. The construction of horse-car lines here may possibly offer a market for the sale of discarded types of American street cars.

MOTOR BOATS IN SIAM.

Consul-General Schuyler, of Bangkok, reports an opening in Siam for steam launches, motor boats, etc. He writes:

The city of Bangkok has more launches plying upon its waters than other city in the Orient. These launches are for the most part heavy, clumsy Chinese-built teakwood boats, fitted with old-fashioned steam engines burning wood. There is undoubtedly a great future here for the light-motor launch of American make, which ought to be introduced without delay. Motors using kerosene (petrol) would be the best type as that can be obtained all over the country, while engines using gasoline can only be employed near Bangkok. Manufacturers of launches and engines are requested to send catalogues of motor launches and boats for distribution and for use in the catalogue library of this consulate-general, such catalogues to include details of fittings, separate motors without boats, terms of sale, and prices.

AFRICA.

NEW TRUNK LINE.

CONSTRUCTION PROGRESSING—RICH COUNTRY WILL BE OPENED.

Consul-General Guenther, of Frankfort, Germany, reports a new railroad project in Africa. It is to open up an enormously rich copper country. He writes:

According to the German Colonial Gazette a new railroad has been projected in Africa. It is to have a length of about 900 miles, and starts from the port of Benguela, a place of about 1,400 inhabitants on the coast of the Portuguese colony Angola, in West Africa. It will run almost due east, via Caconda, to Dimbuko, thence north to Bihé, thence again due east, via Mosico, to Nanacandundo. Farther on the road will cross the border between Angola and the Katunga district belonging to the Kongo Free State, where the Ruwe mine on the Lualaba River will be the main objective point. Other branches will run to the northern part of Katunga.

WORK UNDER WAY.

Large shipments of railroad materials have been sent to Benguela and Monte Saboa, and the survey up to Caconda (50 miles) has been completed. Two German steamers have brought 400 strong Liberian negroes, who are to be employed in the beginning, when the hard-

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est work has to be done. The estimated cost of the road is about $22,000,000, an expenditure that appears justified by the prospects dependent upon opening up the mineral riches of Katunga. In the district of Cambove alone there are said to lie 90,000,000 tons of copper ore, running 15 per cent in copper, also innumerable tons of a lower grade copper ore. The Fungurume mines are rich. Some of the copper deposits in the region are thought to be the richest in the world. The Ruwe mine is also rich in gold and platinum; 50,000 ounces of gold in an easily treated form on the surface are awaiting treatment. The prospects of the ore deposits in Katunga have undoubtedly been the determining factor for the construction of the road. Besides the high plateau of Caconda, in the Portuguese possessions, is very healthy and extremely fertile, so that all the coast districts are supplied from there with cereals and vegetables. Considerable quantities of rubber and wax can also be furnished. The Lobito Bay could be made into an excellent harbor for the road. Later on connection can be made with the line from the Cape to Cairo. The trip by way of Lobito to South Africa would then be shortened four days. Even Johannesburg would be reached three days earlier than by going via Cape Town.

RESULTS OF AMERICAN METHODS.

Consul Mahin, of Nottingham, writes that the annual report of the secretary of the British Amalgamated Society of Railway Servants, just published, shows the results of adopting American methods in using larger locomotives, running heavier trains, and otherwise. This was begun in 1900, when there was an increase of 18,000,000 tons of traffic in comparison with 1896, and an increase of 22,000,000 in freight train miles. After another four years, in 1904, the increased tons of traffic were nearly 25,000,000 as compared with 1900, but the mileage instead of increasing had decreased about 25,000,000 miles. The Northeastern Railway, for illustration, had withdrawn 142 engines from service, but owing to the larger type of locomotive now used the company's tractive power had nearly doubled. The secretary's report covered various other railway subjects, but its general argument was that the adoption of modern methods, though increasing the efficiency and working capacity of the railways, was seriously displacing individual labor.

Consul Marshal Halstead, of Birmingham, England, calls attention to the fact that the London and Northwestern Railway Company, its stockholders approving, made a contribution to the British Cotton Growing Association. It is significantly indicative of the strength of the sentiment which exists in England favoring the growth of cotton in the British colonies in competition with the United States. It is only one of the many instances of the kind. The chairman, at the half-yearly meeting, said the directors recommended the shareholders to make a grant to the British Cotton Association of £1,000 ($4,866.50), and the shareholders voted in approval.

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SCIENTIFIC.

USEFUL INVENTION.

CENTRIFUGAL FILTER FOR OIL

REFUSE MATTER TO BE UTILIZED—DESCRIPTION OF THE MACHINE.

Consul Harris, of Chemnitz, reports a valuable process for filtering oil. It ought to commend itself to parties having large quantities of oil that is mixed with refuse matter. He says:

The keen competition which is making itself felt in practically every article of manufacture which is brought on the market to-day has had the effect of taxing human ingenuity to the utmost in order to invent and devise new machines and apparatus which will lessen the cost of production in large manufacturing plants. Refuse matter which a few years ago was cast away as something absolutely useless is now utilized by some newly found method, by which it enters into some phase or process through which other articles are manufactured. This has been no better demonstrated in recent years than by the various kinds of methods thought out for the purpose of minimizing the cost of lubricating oils. The use of machinery to-day is

FIG. 1.—Centrifugal filter in use.

such that the demand for oils has become one of the most important items of expense, and experience has shown that the former practice

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of discarding oil once used very materially increases the cost of production. Any process which enables oil once used to be filtered and cleaned for use again is found to be a great saving of expense over the original cost of the same oil. In every large factory where machinery is used to any extent there is usually a surplus of coagulated mucous oil, which, according to the old method, was placed on a sieve sort of arrangement and permitted to gradually trickle through. This primitive method, however, is ineffective in forcing all the oil out of the mass of concrete matter, and is also a great waste of time.

One of the most complete and radical methods of separating oil from coagulated substances is the application of centrifugal force. This method has already been adopted in America under different forms, but the apparatus of Gebrüder Heine, of Viersen, Rheinland, Germany, may contain some points which will interest manufacturers having factories and mills in which large quantities of lubricating oils are necessary.

This oil filter consists of a perforated cylinder shaped drum, in which the concrete mass is placed. Only five minutes' time is necessary by centrifugal force to drive every particle of mucous oil out of the mass placed in the cylinder. This oil is drained into a separate vase, from which it can be removed ready for use.

NEW WATER FILTER.

Consul Harris also briefly describes a novel process for filtering waste waters. It is well adapted to the growing needs of municipalities. He writes:

One of the most important questions in connection with the public health, especially at a time when cholera has again appeared in Germany, is the rapid and rational purging of cities of all rubbish, filth, etc. The art of artificially filtering the refuse water rationally and more rapidly than the slow process of nature is being highly developed in the overcrowded cities of the Empire. The firm of Wilhelm Rothe & Co., Berlin, have introduced a system of filtration which is meeting with much success. The component parts of this filtration plant consist of various divisions containing sand, chemicals, etc. The process destroys all germs absolutely, and is especially suited for construction in the immediate neighborhood of cities having hospitals and garrisons. A full explanation of the technical side of this process would occupy too much space, but any letter of inquiry directed to the firm above mentioned will be answered with complete information.

REVOLUTION IN OIL REFINING.

USE OF CHEMICALS DISPENSED WITH—ECONOMICAL PROCESS.

Consul Fleming, of Edinburgh, Scotland, reports a remarkable revolution in the refining of mineral oil. It is a process that will save enormous losses, at least 20 per cent now sustained, and will do away with the expensive methods that depend to-day on the use of chemicals. Referring to the rise in oil shares the Glasgow Herald says:

It appears to be the outcome of an important interview which took place between three or four of the Scottish oil managers and their

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chemists and a well-known London consulting chemist, Doctor McAlpine, in connection with an invention which Doctor McAlpine says will revolutionize the present system of refining Scottish mineral oils. Doctor McAlpine claims to be able to dispense with chemicals altogether, and, further, to reduce the present loss in refining to the vanishing point. These improvements of such a revolutionary character will, if proved, place the oil trade upon a basis it never had before, for the reason that chemicals form a very expensive item in the refining process, and the present refining loss, estimated to be anything between 20 and 25 per cent, converted into burning oil, etc., will be so much extra profit. It is understood that negotiations will proceed forthwith toward an agreement being entered into between the various parties, and this is taken to mean that considerable importance is placed upon the claims put forward by the patentee.

Doctor McAlpine's claims we understand to be four in number, and of the greatest importance, viz:

(1) The abolition of chemicals.
(2) Two distillations instead of three.
(3) Twenty per cent increased yield of products.
(4) Improved quality of all the products.

As is well known, vitriol and caustic soda form two of the costliest items in oil refining, and many thousands of pounds per annum would thereby be saved to each company. The simplicity of distilling the oil by one distillation less is another economical invention, and this closely followed by securing one-fifth more of liquid products, which at present are irrecoverable, will permit profits to be reached in the oil trade never previously dreamed of.

ARTIFICIAL DIAMONDS.

INTERESTING EXPERIMENTS WITH REMARKABLE RESULTS.

Consul-General Guenther, of Frankfort, writes concerning the most recent efforts for the production of artificial diamonds, as follows:

Crystallized carbon, as chemistry has taught for a long time, occurs in nature in two entirely different forms—as diamond and as graphite.

Anybody who can afford to do so can burn a diamond in oxygen and become convinced that nothing remains except pure carbonic acid. The only compensation, except this knowledge, for the costliness of the experiment is the brilliant light colors under which the diamond, so to speak, gives up its life.

When the nature of the diamond was first discovered many chemists were full of hope that they would succeed in producing artificial diamonds of considerable size from carbon. This, however, has not been accomplished thus far, and to-day it is assumed that the formation of large diamonds principally found in South Africa has been under conditions which have not been possible to produce in the laboratory. From time to time artificial diamonds have been made from carbon under great pressure, but these experiments were always more expensive than the value of the diamonds obtained and besides were very dangerous. In one instance the laboratory of the experimenter was completely destroyed.

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A NEW METHOD.

The French chemist, Moissan, has shown a new method for producing artificial diamonds by the employment of molten iron as a solvent for carbon, and using the electric stove, invented by himself, for producing a degree of heat hitherto not reached. Through the intense heat of this electric stove and by sudden cooling of the molten metal the carbon is separated in the form of very small diamond crystals. The London Lancet reports a further step in advance in the production of crystallized carbon, through experiments of Doctor Burton, of Cambridge. This scientist has proven that the diamond is a denser form of carbon crystal than graphite, and that a lesser pressure is sufficient for producing artificial diamonds than had been employed heretofore. Doctor Burton in his experiments used a molten alloy of lead and some metallic calcium, which can also hold a small quantity of carbon in solution.

WONDERFUL RESULTS.

If the calcium is separated from the molten mass, some of the carbon crystallizes. The separation of calcium can, for instance, be accomplished through steam. If the introduction of steam is made during full red heat, then small graphite crystals are found in the resulting crust of lime; if the steam is introduced during a low red heat, no graphite is formed, but a number of microscopical crystals are formed, the properties of which are entirely identical with those of natural diamonds. These experiments, which may be continued, strengthen the belief that it may be possible, some day, to produce in the laboratory of the chemist diamonds of sufficient size and perfection to compete with natural diamonds.

These experiments furnish a new theory with reference to the probable origin of natural diamonds, which may not have been under an excessively high temperature, but from a peculiar crystallization from a yet unknown solvent, perhaps under high pressure. The artificial diamonds obtained by Doctor Burton are pronounced to be the finest so far observed, because they possess an unusually high power of refraction.

Sir William Brookes, in a lecture recently delivered at Kimberley before the British Association, called attention to a peculiarity of diamonds, namely, that they are especially transparent for X-rays, while imitation diamonds hardly let these rays pass through, and he declared that this furnished an excellent means of distinguishing genuine from imitation diamonds.

FIREPROOF FLOORING.

COMPOSITION AND APPLICATION DESCRIBED.

Consul-General Mason, of Berlin, reports on a valuable fireproof flooring. He sends several samples, which are on file in the Bureau of Manufactures where they may be seen and examined by interested parties. It is of special interest to architects and builders. The report follows:

The recent publication in an American technical magazine of a paragraph concerning the use in Germany of fireproof flooring made

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from wood pulp and other materials, has inspired so many letters of inquiry from American architects, builders, and insurance companies, that the following report has been prepared as a collective response to such inquiries:

The use of jointless flooring, made from pulverized wood fiber and other materials, and laid in a plastic condition on a cement foundation, was begun in Germany, more or less experimentally, several years ago, and has proved so successful and advantageous that there are now in this country several manufacturers of such material, each of whom, as is natural, claims some special advantage for his flooring or the methods of laying it. Leaving out of account these more or less important details, it will be sufficient for the purpose of this report to describe the character and methods of laying one of the standard materials of this class which is known as "doloment" or stone wood, and is manufactured at the "Deutsche Steinholz Werke" in Charlottenburg near Berlin. Doloment is a plastic substance about the consistency of mortar, made of pulverized wood fiber, asbestos, and a mineral substance, and colored by the admixture of various oxides to any desirable color or tint. The eight samples which are submitted as exhibits with this report show some of the shades in most common use, viz, terra cotta, gray, cream-white, and grained in imitation of red or blue veined marble.

HOW LAID DOWN.

It is laid down in a smooth, even layer, half an inch thick upon the beton or cement substructure, which in German construction rests upon steel joists and forms the foundation of all floors, whether of wood, marble, or other materials. The problem has been to make a continuous flooring which shall cover the entire area of an ordinary room, fit closely at its junctions with upright walls and be not only fireproof, but impervious to liquids, dust, vermin of all kinds, a poor conductor of heat and sound, easily cleaned and withal neat and sightly in appearance. All these requirements appear to have been successfully reached by the material which is now under consideration. In practice it was found that the doloment and other similar plastic floorings adhere very firmly to the beton foundation, so that when the latter was subject to any severe strain or fracture, through extreme changes of temperature or the uneven settling of the building, the flooring was liable to crack under the tension thus created. To obviate this the plan has been adopted of laying between the beton substructure and the fireproof flooring an insulating layer of a composition composed of fine cork chips, asbestos, sawdust, and some cohesive matrix to hold the other ingredients together. This intermediate layer of comparatively light elastic substances, separates the wood-stone flooring from the rigid cement foundation, makes it warmer and less resonant, absorbs whatever moisture may enter by absorption from the outer walls, and—what is most important—enables the floor to be laid completely jointless and impermeable over a large surface and joined tightly at the edges to the circumscribing walls.

The composition of the cork-asbestos layer is such that it remains to some degree elastic after it has become firm, and it therefore readily takes up and neutralizes the effect of any cracks that may occur in the cement base without affecting the surface of the stone-wood floor.

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Floors of this character are now used in the best class of new buildings in Great Britain and, in the great new electrical works of Messrs. Siemens & Halske, in Charlottenburg, which are supposed to represent the highest standard of modern construction. Doloment is used for the flooring of vast departments where smoothness, cleanliness, and imperviousness to water, chemicals, fire, and decay are indespensible requisites. When finished, doloment has a surface like that of polished marble.

DESTRUCTIVE TEREDO.

METHODS TO GUARD TIMBER AGAINST ATTACK.

Consul L. Edwin Dudley, of Vancouver, British Columbia, sends the following information relative to teredo-proof pile covering:

In a former report, published May 22, I contributed a note regarding a new coating for piles to protect them against the teredo. I subsequently learned that the machinery for doing this work had not been fully perfected and that the company was not in a position to undertake contracts. Many inquiries came to me from different sections of the United States, but the manager was unable to reply at the time. Now the machinery has been perfected, the plant is in working order, and the manager has written to all inquirers, giving particulars.

I was present with many others when the plant first began operations. Of course the employees were all new men, unaccustomed to the peculiar work, and yet I saw 40 feet of a pile covered with this new coating in fourteen minutes. The pile was immediately rolled overboard into the water, and as soon as possible was hauled up on the skidway, and the coating had hardened in the few minutes of immersion in the cold salt water so that when struck with a heavy hammer it would ring like a bell.

THE PREPARATION AND ITS APPLICATION.

The machinery for doing this work has been invented and specially constructed, and, while it seems very simple, it is undoubtedly the result of long, patient thinking, many experiments, and much experience. The machinery is so constructed that the pile as it moves forward turns. The coating is in a tank below the log, heated to boiling point. A web of fabric about 10 inches wide, after being immersed in this liquid preparation, is wound spirally around the log, one thickness following another, and carrying with it a sufficient quantity of the preparation to make a very thick coating. A heavy galvanized-iron wire follows the winding of the fabric under great tension, so that it binds the coating tightly to the logs whether they be wet or dry. The preparation consists of asphaltum, slaked lime, hydraulic cement, brimstone, crude creosote, asbestos, and sharp sand or granite rock crushed to a sufficient degree of fineness. After an application of the coating the log passes in front of a machine in which comminuted rock or fine sand, highly heated, is blown upon the coated pile, making a solid outer surface. This preparation being applied at a very high temperature penetrates the wood to a considerable depth, so that it will act in a large measure as a preservative.

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I saw the pile pounded with a heavy hammer many times without in any way injuring its coating. I am told that a pile thus coated has been driven with a hammer weighing 3,200 pounds, with a 15-foot drop, without in any way injuring the coating. I am satisfied, from what I have seen, that this preparation will not be injured by driving nor by the rafting of piles that have been coated.

VALUE OF THE PROCESS.

From the numerous inquiries I have received in response to the former note contributed to Consular Reports I know that some substantial coating of this kind is very much needed, and this preparation seems the best that I have seen. The inventor has formed a local company to supply coated piles to the railways, builders of wharves, and others in this province. What is to be done about exploiting this patent in the United States and other countries has not yet been settled. It appears to me that it will not be possible to coat piles here and ship them long distances on account of the expense, and that ultimately plants must be erected wherever piles coated under the patents of the inventor are to be used. The result probably will be the establishment of plants in the United States and other countries. The inventor of the process, who is manager of the local company, will give further information to all persons who may request him to do so. This invention has been patented in the United States, Canada, and other countries. I shall be glad to place all inquirers in communication with the inventor.

SUCTION GAS PRODUCERS.

SUCCESSFUL USE ON CANAL BOATS AND ENGINES.

Consul Halstead, of Birmingham, England, reports successful efforts with suction gas producers and economic engines in England. He writes:

A short time ago I reported the successful use by a large English engineering firm of a suction gas producer and gas engine as motive power for a small yacht, and in a dispatch of a later date I wrote of a compressed gas driven canal boat. A recent number of "Motor Traction" tells of another gas-driven barge, this one built by Messrs. John I. Thornycroft, Limited, but engined on the same system—"the Emile Capitaine patents"—as their yacht I have mentioned above. For the small yacht it was stated that 1 horsepower per hour could be produced by 1 pound of anthracite, and it is claimed in this article in "Motor Traction" that sufficient fuel can be carried on board the barge for more than a day's run. In the case of the yacht the gas producer and engine were said to occupy only 12 feet 6 inches by 9 feet 4 inches floor space, with 6 feet 8 inches for headroom, the hopper carrying enough fuel for a ten-hour run at from 10 to 12 miles per hour. "Motor Boat" stated in a recent issue that Messrs. Beardmore & Co., of Glasgow, had contracted to install a suction producer and engine giving

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600 horsepower in the *Earl*, a three-masted schooner 136 feet long by 23 feet beam and drawing 11½ feet of water.

Next in importance to the increased use of waste blast-furnace gases—of which the largest installation I have heard of is at the Lackawanna Steel Company works, near Buffalo, where there are, I am told, ten 2,000 horsepower Koerting gas engines, built by the Delavergne Engineering Company, of New York—and waste coke-oven gases, is the development for power purposes of gas producers and suction gas producers. So rapidly has gas-producer practice come to the front it has warranted the publication, and profitably, of both an American and English edition of a periodical which pays special attention to the subject, and the increasing use of gas producers for factories is causing anxiety to gas companies. The fact therefore that the practicability of using producers and gas engines with economy in cost of fuel and economy in room, in boats, is being demonstrated, is exceedingly important.

SMELTING BY ELECTRICITY.

EXPERT OPINION ON INDUSTRIAL POSSIBILITIES IN CANADA.

The Canadian Manufacturer, forwarded by Consul-General Holloway, of Halifax, contains an interview with Doctor Heroult, the French metallurgical ore expert, who is now visiting the Dominion, which will interest persons engaged in the iron industry. The report from the Manufacturer follows:

"In ten years Canada will have become a great metallurgical country. You will see an iron industry in this Dominion larger than in any other country in the world. Canada will yet furnish to the world its iron supply. It will be just the same with iron as with wheat. A decade from now Canada will outstrip all other countries in wheat growing. The production of iron at a cheaper rate than it can be made elsewhere will cause Canada to take a similar position as far as iron is concerned."

The foregoing prophecy was made, not by a Canadian, but by a visitor from France, Dr. P. I. T. Heroult, technical director of the French Electro-Metallurgical Society, who have immense works at La Praz, France, where aluminum and steel are produced. Doctor Heroult is perhaps the best living authority on the smelting of iron ores and the manufacture of steel by the electric method. He has invented the process which is named after him. Two great plants for the refining of steel by the Heroult process are in course of construction, one in Germany and the other at Syracuse, N. Y. The latter is being erected by the Holcomb Steel Company, who have obtained a license from Doctor Heroult to use his invention. The cost of the works will be $1,000,000, and the output will be from 80 to 100 tons daily. The company propose to manufacture tool steel and also high-class billets. The Holcomb Company will be the first concern on the American continent to use electricity in connection with the making of steel. It will be produced by the ordinary method, and the electricity will be applied to a purifying or refining process.

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The great metallurgical expert will not give all his time to the Syracuse enterprise. He has undertaken to superintend experiments in the making of pig iron and steel at a plant which is now in course of construction at Sault Ste. Marie, and for which Parliament, on Hon. Frank Oliver's recommendation, voted $15,000. Associated with him will be Doctor Haanel, superintendent of mines. It was on Doctor Haanel's advice that Hon. Clifford Sifton, when minister of the interior, dispatched a commission to Europe to study and report upon the electric process of smelting ores and making steel. Doctor Haanel personally conducted the commission, which was fraught with great consequences to Canada.

FEASIBILITY OF THE NEW METHOD.

When the commission reported upon the feasibility of the electric method there was a universal demand from all parts of the world for the report, which received the highest commendation from scientific authorities. From that date public interest in electric smelting became intensely keen, and plants for the utilization of the new method were started in various countries. In Europe and in the United States, where fuel is cheap, the ordinary processes can be utilized for refining. In the extreme west of Canada fuel does not cost much, but in the interior the price is prohibitive. This is especially true of Ontario and Quebec, where there are immense deposits of magnetite. These ore bodies have long remained undeveloped because they could not be economically treated. But in their vicinity is waterpower in abundance, and that means cheap fuel. Doctor Heroult has smelted magnetite by electricity, and it is a success. He is reasonably sure we can produce pig iron and a high-grade steel here. But to make certain beyond all peradventure, and to ascertain all the facts that can be learned in connection with electric smelting experiments for six months will be conducted at the "Soo" in a plant of special design and construction. Doctor Heroult thinks that under favorable conditions pig iron can be made for $10 per ton, while steel will cost only about $4 per ton more to produce. This means a saving of several dollars as compared with the cost of producing pig iron and steel elsewhere. But even if the cost were the same as in other countries it would mean great things for Canada.

When asked what the successful smelting of iron ores would mean to Canada, Doctor Heroult said: "Pig iron is the basis for structural and other steel. At present Canada expends $50,000,000 and $60,000,000 in buying steel abroad. The idea ought to be to make that steel in this country out of Canadian material by the aid of Canadian waterpower and Canadian labor. Even if the cost of making iron and steel here should only equal the cost elsewhere you would keep in Canada the money you now send abroad. But we expect the cost of manufacture will be less here. Think of what it means. The retention in Canada of $60,000,000 now yearly spent abroad, the supplying of the new demand for steel rails, structural steel and other classes of the product which has arisen in consequence of the country's development, the profitable sale of your surplus products in foreign markets, and the creation in this country of numerous other industries more or less dependent upon iron and steel. As to the iron resources of this country, from all that I can learn, they are

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vast indeed. In Sweden the quantity of ore is sufficient to supply the markets of the world for one hundred years. If we were to compare the quantity in Canada with that in Sweden I should say Canada has three times as much."

BIG PAPER-MAKING MACHINE.

Consul Fleming, of Edinburgh, Scotland, calls attention to a large paper-making machine which he says an Edinburgh firm of manufacturers has just completed. It is the largest paper-making machine ever constructed in the United Kingdom. Some idea of its dimensions may be afforded by the statement that a shed 185 feet long is not sufficient to house it. The striking feature of the machine is its great width. This is called for by the fact that the paper-mill company in Sweden, to whose order it has been built, intend to use it for the making of two sheets of newspaper, each 75 inches wide—or 150 inches of finished paper. To run a sheet of this width at the high speed of 500 feet per minute requires a machine with exceptional driving gear and rolls of extraordinary diameter and weight. The paper made is to have a better finish than is customary on newspapers in Great Britain, and to that end an enormous stack of calendar rolls is provided. These rolls weigh about 70 tons—the bottom one alone weighing 14½ tons. The engine (steam) by which the machine is driven is capable of developing 200 horsepower. With all accessories the complete machine weighs 550 tons, and a special steamer has been chartered to carry it from Leith to Sweden. I am informed that the price to be paid by the Swedish company is $72,997.

HUNGARIAN ASPHALT.

Consul-General Chester, of Budapest, reports that asphalt, or bituminous earth, is found in large quantities in various parts of Hungary. By chemical processes, he reports, mastix and mineral oil are produced from it. In 1902 Hungary imported 26,424 metric tons of 2,204 pounds each, or 8,473 tons more than the year previous. About half of these came from Austria. There is a duty of 48 cents per 220 pounds on imported asphalt (bitumen), but the asphalt earth imported contains 50 per cent of asphalt (bitumen) against 12 per cent contained in the native or Hungarian earth. Against this advantage of the foreign earth Budapest's Chamber of Commerce is protesting and moving. It has asked for an increase in the tariff. Consul-General Chester sent a couple of price lists with his report. These are on file in the Bureau of Manufactures, Department of Commerce and Labor, where interested parties may examine them.

GOLD FROM SEA WATER.

Consul Mahin writes, from Nottingham, England, that the Belgian process has been found successful in securing gold from sea water. He says:

The assumed practicability of extracting gold from sea water, which was the subject of a report from this consulate in Daily Consular

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Reports of April 6, is likely to be strengthened by a process lately patented in Belgium, described as follows: A ton of sea water is treated with about 5 cubic centimeters of concentrated aqueous stannous chloride, when the gold is converted into purple of Cassius and precipitated together with magnesium hydrate and the excess of tin, by the subsequent addition of about a pound of slacked lime. From this precipitate the gold is extracted with dilute potassium cyanide solution and isolated by any of the methods commonly used in the cyanide process (e. g., precipitation with zinc). Sea water from the Mediterranean and the English Channel yielded no gold by this process, whereas samples from the Atlantic furnished traces.

ARTIFICIAL GRANITE.

Consul Liefeld, of Freiburg, Baden, reports a method for the manufacture of artificial granite. He writes:

An invention which relates to the manufacture of artificial granite for use in building and other purposes was recently registered. The object of the invention is the production of a cheap and durable material, which, when set, has the appearance of granite, and which can be used for many, if not all, the purposes for which natural granite is employed. For the purposes of the invention, granite or marble chips, or both, are taken and mixed with a suitable proportion of cement, water, coloring matter, and other ingredients, if desired, until it forms a hard, consistent paste. The mixture is then placed in molds, in which it is allowed to remain until set, after which the blocks are removed and immersed in water until they have absorbed sufficient moisture. They are then removed and placed in a warm and shady place until they have attained the required dryness and hardness, after which they are polished.

NEW AUTOMATIC STOKER.

Consul Creevy, of Glauchau, Germany, reports the recent invention of an automatic stoking apparatus. It is now on the German market and is giving satisfaction, gaining favorable comment from engineers and the users of steam engines. This apparatus is designed, says Consul Creevy, to overcome the wide fluctuations in distribution common in other automatic stokers. On other apparatus the steam pressure regulators are not sensitive enough to properly distribute fuel for varying degrees of hardness evenly, thereby causing irregular steam pressure. The new automatic stoker overcomes this evil. In fact, it is so far superior, say those who have seen several, to others now in use on the Continent that one is warranted in calling the careful attention of all interested parties to the report and drawings. These latter are exceedingly well done, and are in sufficient detail to help an engineer or a mechanic to understand the method by which the machine works.

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MEDICAL.

NEW DISCOVERIES.

TREATMENT OF APPENDICITIS.—SURGERY UNNECESSARY.

Consul-General Guenther, of Frankfort, Germany, reports the successful treatment of appendicitis by means of "collargol," a silver solution. He writes:

Much has been written on the treatment of appendicitis, principally with reference to the question whether, in a given case, an operation must be performed to save the life of the patient. It would doubtless be a great boon if a remedy could be found to make an operation unnecessary. Such a remedy, it is alleged, has been found under the name of "collargol." Collargol is a form of pure silver soluble in water. Chemical manipulations for rendering silver, quicksilver, and some other metals soluble in water were discovered within the last few years. The antiseptic property of silver has long been known, as, for instance, in the form of lunar caustic, which has also been administered internally. Its use, however, has been very limited. Based upon this knowledge successful experiments have been made by some noted physicians through the use of the soluble, nonirritating, and nonpoisonous silver in suppurative diseases, as, for instance, in the dreaded puerperal fever and other suppurative fevers.

Doctor Moosbrugger, of Leutkirch, has now used collargol in appendicitis, as well internally as externally. This treatment, according to his statement in the last number of the Munich Medical Weekly Review, has yielded extraordinarily good results. Within two or three days after treatment a decided improvement was noticeable in incipient cases. In cases where an inflammation of the peritoneum had already taken place, a cure was, however, very slow—often only after weeks of treatment both internally and externally. Excepting two very severe cases out of the seventy-two which came under his observation and treatment all were cured without any surgical operation. He claims that this treatment is very much superior to any other, and that he is justified in stating that every case of appendicitis, if early diagnosed, be it ever so acute and malignant, can be cured with collargol without resorting to the knife.

In view of the otherwise favorable experiences with this remedy it is very probable that his opinion will prove correct. But after all it will yet require a great deal of very critical observation before it will be safe to dispense with a timely operation, which is capable of saving many lives. The published statements of Doctor Moosbrugger are not explicit enough as to the history of the cases to make a real criticism

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possible. At all events, his statements deserve careful attention. On the other hand, it can not yet be stated how long the cure will last. Light cases of appendicitis can be healed for a time, as is well known, the question, however, is for how long. Further experiments will be awaited with great interest, says the Didaskalia.

PRECAUTIONS AGAINST CHOLERA.

CLASSIFIED WITH PLAGUE AND YELLOW FEVER.

Consul Walter C. Hamm writes from Hull, England, as follows regarding the precautions taken at that port and in England to guard against the introduction of cholera:

The disease is classified with plague and yellow fever. When within 3 miles of any English port the master of any vessel having cholera on board is bound to fly a yellow and black flag at the masthead in the daytime. At night the signal consists of three lights at least 20 feet above the deck, not less than 6 feet apart, arranged in the form of an equilateral triangle, the top light showing white, the other two red. The vessel must be moored at a quarantine station, and must remain there till completely disinfected. A further precaution is that where a vessel, not infected, has passengers who are in an unwholesome condition, or have come from a place infected with cholera, the local authorities may prevent the landing until all on board satisfy the doctor as to their names, places of destination, and addresses at such places. The information is forwarded on, and passengers are required to communicate any alteration of address at the port of landing. Bilge water must be pumped out, or, if the doctor thinks it necessary, if this would spread the danger, sealing up is resorted to. Should the water used for cooking on the vessel be suspected, all the tanks will be emptied and a fresh supply provided by the sanitary authority.

Communication between Hull and all the ports of northern Europe is regular and frequent, but the knowledge that strict care is taken to prevent the introduction of cholera into this country will be reassuring at the present time when the disease has appeared in Germany.

TUBERCULOSIS IN IRELAND.

Consul Moe, of Dublin, writes that the deaths from all forms of tuberculous disease which were registered in Ireland during the quarter ended June 30, 1905, amounted to 2,984, a figure which represents an annual rate of 2.72 per 1,000 of the estimated population of the country, and is 15.2 per cent of the total number of deaths (19,616) registered during the period; or, in other words, that of every 100 persons whose deaths were registered during the quarter 15 were the victims of tuberculous disease. The report of the registrar-general states that these figures are not revised, and that "the revision of the figures will probably increase the death rate from tuberculous disease." Curiously, the number of deaths from this disease was greater in the rural than in the urban districts.

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CEREBRO-SPINAL MENINGITIS.

PROGRESS OF THE DISEASE EXPLAINED.

Consul-General Guenther, of Frankfort, writes that Professor Doctor Jaeger, of Strassburg, calls attention to an important observation in the last number of the Medical Clinic with reference to the spreading of cerebro-spinal meningitis.

We have found, says Doctor Jaeger, in all cases of cerebro-spinal meningitis, in examining the mucus of the nose, without exception, intracellular diplococci of characteristic form, and frequently have been able to identify them as genuine meningococci by cultivating them and by the agglutination test. Such finds, as shown by control examinations, were never made with persons who had not been around cerebro-spinal meningitis patients, but with 30 to 50 per cent of persons who had been about such patients such intracellular diplococci were found. From their mucus of the nose meningococci could be cultivated.

This furnished the proof that also in epidemic cerebro-spinal meningitis, similar as with the plague, cholera, typhus, and diphteritis, healthy bacilli occur, which, without often causing the least feeling of sickness to the persons, carry the exciters (Erreger) of epidemic cerebro-spinal meningitis, which are thrown out by coughing, sneezing, expectorating, and so may seriously infect more susceptible persons. Through this the surprising jumps made by the epidemic are at once explained, and not less the numerous sporadic cases of this disease. These facts can be used for the prophylatic treatment in the most extended form; by examining the mucus of the nose of the persons around cerebro-spinal meningitis patients it is possible to find the dangerous bacilli, and to render them harmless by isolating the persons, carefully disinfecting their discharges—their handkerchiefs—as well as to fix the time, by repeated examinations of the mucus of the nose, when danger of infection by such persons is no longer to be feared.

TO GUARD VACCINE VIRUS.

Consul-General Guenther, of Frankfort, reports that the Royal Prussian institutes for preparation of animal vaccine virus at Berlin, Konigsberg, Stettin, Oppeln, Halle, Hanover, Cassel, and Cologne will be henceforth designated as "Royal Prussian Vaccine Institute" (Impfanstalt). They are to be inspected once a year. Every second year this inspection will be made by the "referendary" for vaccination of the medical department of the "Cultus" ministry. In the other years the competent Government and medical councilor has to inspect. The "referendary" alluded to must have the Government and medical councilor of the district in which the institute is located present during the inspection. At every inspection the director, the assistant director, and the employees of the institute have to be present, as well as the veterinary surgeon. The inspection must include the condition of the buildings, the implements and linen, the bookkeeping, the manner of vaccinating the calves, and the preparation of the vaccine virus,

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MISCELLANEOUS.

GOOD ROADS.

KNOWLEDGE AND SKILL REQUIRED TO MAKE AND MAINTAIN.

Consul Halstead, of Birmingham, England, reports results of unintelligent, unscientific road repairing. He quotes some excellent advice about how not to make or repair a road. He writes:

When in London recently I noticed that the great road along the Thames, one of the most important thoroughfares in London, known as the Thames Embankment, was very rough, and in a recent article in the London Mail, entitled "How not to make a road," some observant person tells of the methods used when the Embankment was last torn up and "remetaled" and reironed, which confirms in many respects the dispatch I recently had published in Daily Consular and Trade Reports, September 9, entitled "Dust and motor cars." This writer had thought that a sound knowledge of roadmaking would surely be displayed in repairing such a thoroughfare as the Thames Embankment. After the scarifier had been at work and the road torn up, loads of "blue metal," he said, were dumped down, but this stone was of a very uneven nature, both as to size and shape, many of the pieces being long and narrow, while others were small and approximately cubical, and there was additionally a large proportion of irregularly shaped stones. The loads were roughly spread across the roadway, and in many cases "the wheel ruts of the carts were not even raked out." Continuing his description of what was done as roadmaking for this great thoroughfare, he says:

"Over this chaotic heap was strewn—shade of Macadam!—pulverized clay. Water was then copiously flooded on to this interesting mass to induce the clay to get in between the crevices or chasms in the roadway. This it speedily did, although naturally much remained as mud on the surface. Then the steam roller got to work, and soon the roadway looked quite smooth and nice, and he who knew no better would have passed by and said: 'That is a fine bit of work.' He who knew, however, and saw it done said: 'Give it a few weeks and it will be as bad as ever.'"

REMEDY FOR BAD ROADS.

The writer acknowledges that one must not find fault without being prepared to show wherein lies the error, and proceeds to do so. The stone used on the Thames Embankment was not properly graded, and was so unequal in size it could not be expected to "bind" properly. Very little of it would have passed the proper 2½-inch ring test. It was not properly raked and surfaced, and "it stands to reason that the steam roller could not put on the bottom of a cart rut or other

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depression the same pressure it brought to bear on the higher portion or a perfectly smooth surface." It should have been, but was not, carefully raked and dry rolled before the binding material was put on, and this binding material instead of being pulverized clay should have been metal chips or waste of as large a size as could conveniently get between the stones laid down. This binding material having been thoroughly scattered and spread, water should have been applied to wash the chips into the crevices and then the whole thoroughly 'wet rolled." Clay binding in wet weather is merely a cushion of mud between stones and in dry weather simply a pad of dust. "It is otherwise, however, with stone chips, and if of proper stone and properly used do their work admirably."

In conclusion, he complained that the crown of the road was too high, thus forcing the traffic into a confined space and making one part of the road carry an unfair share.

BERLIN'S TELEPHONE SYSTEM.

ONE OF THE MOST REMARKABLE SYSTEMS IN THE WORLD.

According to Consul-General Mason, of Berlin, the telephone service of the German capital is well worth study. It has grown to enormous dimensions and has features that will strike many as desirable. He writes:

The telephone system at Berlin is a branch of the Imperial Postal Service, and is administered throughout by employees of the Government, who hold their positions for life or during good behavior, and receive pensions when they finally retire by reason of old age or disability. From a beginning somewhat tardy, in comparison with other large European and American cities, the service here has grown to one of the largest in the world, not less than 86,000 telephones being now installed in the public system of greater Berlin. The long-distance telephone service of this city embraces within its scope more than 2,600 cities and towns in Germany and other European countries, including capitals like Paris, Brussels, Rome, Vienna, and St. Petersburg. For this branch of the service the central telephone bureau is equipped with a staff of operators, mostly women, who are competent in the various European languages. The short-distance service includes the city of Berlin proper, which is divided into 9 districts, each with its central exchange, and 18 branch exchanges in the various suburbs within a radius of 5 miles from the central station in Berlin.

COST AND EXTENT OF SERVICE.

The cost to subscribers per annum for a telephone installation in Berlin is from 180 to 200 marks ($42.84 to $47.60) per annum, while for certain suburbs, where the instruments are less frequently used, the cost varies from 80 marks ($19) at Adlershof to 140 marks ($33.32) at Steglitz, and 160 marks ($38.08) at Westend, which is the extreme western section of Charlottenburg. The largest number of instruments embraced in one district or exchange is District or "Amt" I,

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with 13,538 connections; next come Amt IV with 12,884, and III with 10,503. In the organization of the various exchanges one female operator is required to attend to the calls of from 100 to 200 telephones. The operators are carefully educated and selected, ably directed, and are for the most part alert and efficient. The connections between the various district exchanges are cased in earthenware conduits laid underground, but the wires to subscribers' instruments are mainly strung on high wrought-iron frames set on the roofs of the tallest buildings, and are never permitted in any position so low as to interfere with the fronts of buildings or the traffic of the streets. At all the branch post-offices and district exchanges, as well as at various other prominent places throughout the city, are automatic public telephones, which any person may use after dropping in the slot a 10 pfennig piece, the value of which is 2½ cents in American currency.

LONG-DISTANCE RATES.

The rates for long-distance service are as follows for a communication which does not exceed in duration three minutes. The following schedule includes only Germany:

To all places within a radius of—	Cents.
15 miles	5
30 miles	6
63 miles	12
315 miles	24
625 miles	48

The rates for telephone service to foreign countries are specially arranged with the governments of the several neighboring nations, and are relatively higher than those between points within the German Empire.

WORLD'S HOP CROP.

LARGE INCREASE OVER LAST YEAR.

A timely report on the world's hop crop has been furnished by Consul Baldwin, of Nuremberg. It shows a gain of 600,000 American hundredweight over last year, and suggests cheaper prices for the coming season. The report follows:

The Bavarian hop crop promises to be rich, both in quantity and quality, especially in the Spalt and Hallertau districts, where the yield this year gives beautiful hops, of full size and rich quality.

Bohemia will also have an abundant crop. The Saaz district is estimated to yield this year 210,000 American hundredweight, against 110,000 last year; the Auscha district 77,000 hundredweight, against 47,000 last year.

The world's hop crop is estimated as follows in American hundredweight:

Germany:		
Bavaria	308,000	
Wurttemberg	88,000	
Baden	44,000	
Alsace	110,000	
Prussia	33,000	
		583,000

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Austria:		
Saaz district	209,000	
Auscha district	77,000	
Dauba district	22,000	
Galicia	22,000	
All other districts	47,000	
		377,000
Russia		66,000
Belgium		110,000
France		66,000
England		605,000
America		528,000
Australia		16,000
Total		2,351,000

This is about 600,000 hundredweight more than last year.

Undoubtedly lower prices may be expected for the forthcoming hop season. At present Bavarian hops, medium quality, are offered here at $11 to $13 per American hundredweight; better quality from $13 to $15; finest quality from $18 to $20. In Bohemia, Auscha quality is offered at $15 to $17 per hundredweight; Saaz quality at $21 to $25.

SUGAR CONSUMPTION.

COUNTRIES SHOWING INCREASE.

In consequence of the agreement of the Brussels conference, arrived at on September 1, 1903, the predicted increase in the consumption of sugar has been more than realized, writes Consul-General Guenther, of Frankfort. The increased consumption has been greatest in the countries where the sugar tax was renewed and the incentives to exportation (bounty, premiums, etc.) taken away—Germany, Austria, France, and Belgium—of which France shows the greatest increase, viz, from 23.7 pounds per capita for the year 1902–3 to 44.11 pounds per capita for 1903–4. The increase per capita in the other countries in 1903–4, as compared with the preceding year, was as follows: Germany, from 26.51 to 37.44 pounds; Austria, from 17.4 to 23.17 pounds; Belgium, from 21.9 to 34.8 pounds.

In North America and Europe combined the consumption of sugar per capita of their populations, according to the German returns from which the consul-general quotes, was as follows: From 32.6 pounds in 1902–3 to 37.8 pounds in 1903–4, an unprecedented increase of 5.2 pounds per capita.

CONSUMPTION OF TEA.

Consul-General Guenther reports that the consumption of tea per capita of population of the several countries named in 1903 was as follows:

	Pounds.
United Kingdom	6.03
Russia	.94
Holland	1.45
Germany	.11
France	.06
United States	1.30
Canada	4.34
New Zealand	6.38
Australia	5.92

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WINE PRODUCTION.

ESTIMATE FOR CURRENT YEAR.

Consul Bartleman, of Seville, sends estimates of the world's wine production for 1905, taken from the Revue Vinicole. The production is placed at 176,450,000 hectoliters, equal to 4,661,280,250 gallons.

	Hectoliters.		Hectoliters.
France, including Algiers and Tunis	72,000,000	Portugal	2,100,000
Italy	38,200,000	Austria	1,900,000
Spain	28,750,000	Turkey and Cyprus	1,900,000
Russia	8,500,000	Argentina	1,600,000
Roumania	8,400,000	Peru	1,500,000
Chile	2,700,000	Switzerland	1,200,000
United States	2,300,000	Greece	1,100,000
Germany	2,200,000	Total	176,450,000
Bulgaria	2,100,000		

PAPER AND GRASS.

CHINESE METHODS OF MANUFACTURING CLOTH.

Consul-General Lay, of Canton, describes the Chinese method of making paper and grass cloth. He says:

In the manufacture of all the paper in common use in south China the Kam Li bamboo is used. This particular species of bamboo is grown at the side of a paddy field, and planted very closely. The bamboo can only be used when the stock is less than 2 years old. When ready to be harvested, it is gathered into bunches of ten stocks each. The stocks are thrown into a pond, where they remain for a year or so or until they putrify, and are then placed in a large caldron of hot water. Here they are boiled until all the oil floats on the surface of the mixture. When this layer of grease is removed, the residue is placed on the ground under the sun until perfectly dry. Next the material is placed in a machine, where, after being subjected to very heavy pressure, it assumes the qualities and appearance of paper. This mass is then cut into thick and thin sheets by means of a very thin knife. Besides being very primitive this method is very slow, and the number of workmen employed is large; consequently the price of paper is correspondingly high.

Flax can only be grown in land of great fertility, and is one of the great staple products of south China. After being planted and allowed to grow for at least a year, it attains the height of 5 or 6 feet. When harvested and dried the coarse outside cover of the stalk is removed by Chinese women. Then this fibrous stalk is divided and subdivided into smaller fibers. These fibers, in turn, are separated into single threads of extreme fineness, which are placed in a weaving machine whence they appear as the beautiful grass cloth that is placed on the market for sale. In the manufacture of this cloth all the labor employed is female.

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HOTHOUSE GRAPES.

A FLOURISHING AND PROFITABLE INDUSTRY.

Consul-General Roosevelt, writing from Brussels, tells of the development of the hothouse-grape industry and the extension of hothouse cultivation to other fruits and vegetables. He reports:

About forty years ago the cultivation of grapes under glass was practiced on a small scale at Hoeylaert, a village near Brussels, more as an experimental venture than as a business enterprise. From the beginning the experiment was accompanied by success, and from its small origin this method of cultivation rapidly developed until it now ranks as one of the most flourishing and lucrative industries in this district. To-day there are no less than 10,000 hothouses in the immediate vicinity of Brussels.

The hothouses are usually from 65 to 82 feet in length, and about 26 feet in width. Heat is distributed through clay pipes.

VARIETY OF GRAPES

The principal varieties of grapes are: Frankenthal, a blue, medium-size grape of fine flavor and very juicy; Big Colman, an immense purple grape of attractive appearance, somewhat too solid and lacking in juice, and the Black Alicante and Queen Victoria, both acceptable as to quality and flavor. These grapes are sold on the Belgian retail markets all the year round, at prices varying with the seasons, from about 15 cents to $1 per pound. In the last few years the cultivation of peaches, in connection with grapes, has also become quite profitable, and, although still practiced on a limited scale, has produced excellent results, the yield being first class in every respect.

The cultivation of strawberries, tomatoes, spinach, lettuce, asparagus, and chicory under glass is also carried on in this district by syndicates, which regulate production as well as prices. Grapes grown in this consular district are exported largely to England, Germany, Russia, and Denmark, and occasionally in small quantities to the United States.

RUBBER TRUST.

AUSTRIAN-GERMAN COMBINATION.

Vice-Consul Burrell, of Magdeburg, reports a new combination between German and Austrian parties for the manufacture of rubber. The new enterprise is in the hands of General Director Hansen, of the Hannover Rubber Company. Another outbreak of the rubber makers is expected, for the rivalry that was settled by an agreement a year ago is ready to be renewed. Even the present rubber trust, says Mr. Burrell, is threatened, as the agreement among the contracting parties determines that the trust shall cease to exist as soon as a new factory has been erected to compete with it. Most of the existing stock companies engaged in the rubber industry sustained losses during the year 1904, or at least were obliged to pay much lower dividends than pre-

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viously, and the present year has up till now brought no relief. The prices of raw rubber have risen 25 to 40 per cent; for rubber bands, etc., an increase in price of but 10 per cent has been secured. The trade in staple articles—balls, shoes, etc.—shows an unfavorable result; not only that the sales are small, but also that the existing prices allow of almost no profit. On account of the automobile sport the sale of pneumatic tires has somewhat increased, but here, too, as well as in the rubber-shoe branch, the competition of other countries has made the profit small. The sale of bicycle tires has greatly decreased.

BICYCLES IN SWITZERLAND.

Consul-General Guenther, of Frankfort, reports that, according to a correspondent of the Frankfurter Zeitung, only a very insignificant portion of the bicycles used in Switzerland is supplied by the home industry. During the last five years 74,500 bicycles were imported into Switzerland, of which 49,500 were German, 12,500 French, 6,000 American, and 1,700 English. Less than ten years ago England controlled the Swiss bicycle market; to-day the English trade therein is almost nil. The Zeitung correspondent says that the imports from Germany are steadily increasing; keys, bells, lanterns, oil cans, etc., coming almost exclusively from Germany.

PRIZE FOR A PETROLEUM LAMP.

German papers state that the "Great Grocery Exhibition," an association of large dealers in groceries in England, has now, for the fifth time, offered a prize for a safety lamp for using mineral oil. A lamp is wanted which shall not cost more than 50 cents and which, regardless of any ignorance or carelessness, must not be more dangerous than a common candle. The problem seems to be hard to solve, as a prize has already been offered four times heretofore. Many lamps have, of course, been received for competition, but so far none has satisfied the judges. That such a lamp would be of great value is apparent from the fact that during last year no less than 256 fires, about 5 each week, in the London district were due to petroleum lamps.

PRODUCTION OF CHEAP CAMPHOR.

Consul Mahin thinks a method has been found by which cheap camphor may be produced. He writes:

Natural camphor has become so high priced in Europe that experiments along various lines are being made for the production of a cheaper quality. Turpentine is the usual starting point. A process recently patented in France seems to have solved the problem. Turpentine is first converted into its hydrochloride and thence either into bornyl formate or bornyl acetate, the latter transformation being effected by heating at 130° to 180° C. with glacial acetic acid and anhydrous lead acetate. When decomposed by the usual processes of saponification the formate and acetate yield borneol, together with formic and acetic acids, respectively. On oxidation the borneol thus obtained is readily converted into camphor.

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NEW HEATING SYSTEM IN CANADA.

Consul M. K. Moorhead, of St. Thomas, Ontario, sends an account of a new method of utilizing exhaust steam for purposes of heating. Two public buildings of St. Thomas are heated in this way by the exhaust steam of the engines used in the street-railway and electric power houses. The steam is made to pass around small copper tubes filled with water, the hot water being conducted to the buildings in well-protected 4-inch tubes. The report says:

The city of St. Thomas has just installed a system of heating for the public library and the city hall by utilizing the exhaust steam from the street-railway engines and the electric-light engines at the power house, which is now a waste product. The system is as follows: The exhaust steam is carried through a heater which is filled with small, corrugated copper tubes, these tubes being filled with water. In passing through this heater the water is heated to a temperature the same as the steam. Then, by means of a force pump, it is forced through a main pipe, 4 inches in diameter, to the buildings, where it is attached to the mains and the radiators in the buildings. There is also a return pipe which carries the water back after passing through the radiators, when it is again heated to any desired extent, the heating being regulated either by the speed of the pump or by control valves placed on the mains as they enter each building. The 4-inch mains and the return pipe which carry heat to the buildings are laid underground. They are covered with asbestos wool to prevent the heat escaping, and then wrapped with hemp packing and inclosed in a 12-inch vitrified tile with cement joints. The saving of this system will be practically the whole cost of heating the buildings with coal. There will also be the saving of the labor attending the firing of the furnaces.

KEEPING FISH ALIVE.

A VALUABLE DISCOVERY REPORTED.

Consul-General Guenther, of Frankfort, Germany, writes it is reported the French naturalists, Billard and Bruyant, have made a discovery with reference to keeping fish alive, which may be of practical importance.

The reported discovery concerns a tiny alga, by itself not visible to the naked eye, which posesses the remarkable property to preserve the water in which it exists in a state of great purity for an almost unlimited period. The little plant possesses also the advantage of multiplying rapidly, and thrives in almost all kinds of fresh water. To the naked eye the presence of these algæ is noticeable through the brilliantly green color of the water, provided it contains a large number of them. The two scientists have succeeded in keeping brook trout alive in a large-sized vessel for six weeks, so that their taste at the end of this period did not appear to be impaired in the least. This is all the more remarkable as it is well known that otherwise brook trout can only be kept alive in running water. Leeches have been kept

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alive by the same process one and one-half years without change of the water. Experiments have already been made to make practical use of the discovery for the transportation of live fish.

Live brook trout, for instance, were shipped by rail, the journey consuming seven hours, at a temperature of 25 degrees, in vessels filled with water to which these algæ had been added. The trout were all fresh upon arrival, while of others, shipped at the same time in pure water not containing these algæ, not a single trout arrived alive. The explanation of this phenomenon is probably that these algæ, like other green plants, decompose the carbonic acid exhaled by the fish, and so reoxidize the water. The two scientists are also of the opinion that the algæ also render the poison, which may have been secreted by the fish, harmless.

RAMIE AS AN AUXILIARY.

Consul Liefeld, of Freiburg, Germany, says the official cotton journal of Manchester is urging its readers to take up ramie as an auxiliary fiber in the weaving of cottons, linens, etc. The writer in the journal says it has won a place in other countries and is well worth attention. The Germans have found it an excellent substitute for more expensive fibers. It could easily be grown in England's colonies, is the fiber of all fibers best suited for textiles, grows luxuriantly, etc. It could be cultivated more cheaply than flax or cotton, with both of which and with wool it is a good mixer. It might pay American textile men to give a little attention to a fiber that is finding so much favor in Germany and other parts of continental Europe.

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The publications made up chiefly of reports from United States consular officers in foreign countries include the following:

COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.
REVIEW OF WORLD'S COMMERCE, being a summary of the annual reports contained in COMMERCIAL RELATIONS.
DAILY CONSULAR AND TRADE REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the press, commercial and industrial organizations, manufacturers, etc.
MONTHLY CONSULAR AND TRADE REPORTS, issued monthly, containing miscellaneous reports from diplomatic and consular officers.
SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

The above consular reports were until July, 1903, issued by the Bureau of Foreign Commerce of the State Department; from that date until June, 1905, they were issued by the Bureau of Statistics of the Department of Commerce and Labor, with which the Bureau of Foreign Commerce of the State Department was consolidated July 1, 1903; since July 1, 1905, they have been issued by the Bureau of Manufactures, Department of Commerce and Labor. For details of these publications, the subjects of which the special reports treat, and the reports remaining for distribution, address "Chief, Bureau of Manufactures, Department of Commerce and Labor, Washington, D. C."

The publication of the reports on special subjects, in separate form, was begun in 1890. Those of the following titles are now available for distribution:

Vol. 2 (1890 and 1891).—Olive Culture in the Alpes Maritimes.
Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe; Rabbits and Rabbit Furs in Europe; Cultivation of Ramie in Foreign Countries.
Vol. 20 (1900).—Part I. Book Cloth in Foreign Countries; Market for Ready-Made Clothing in Latin America; Foreign Imports of American Tobacco; Cigar and Cigarette Industry in Latin America. Part II. School Gardens in Europe.
Vol. 21 (1900).—Part I. Foreign Markets for American Coal. Part II. Vehicle Industry in Europe.
Vol. 23 (1901).—Part I. Gas and Oil Engines in Foreign Countries. Part II. Silver and Plated Ware in Foreign Countries.
Vol. 24 (1902).—Creameries in Foreign Countries.
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Vol. 33 (1905).—Industrial Education and Industrial Conditions in Germany.
Vol. 34 (1905).—Marketing Goods in Foreign Countries.
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Vol. 37 (1905).—Machine-Made Lace Industry of Europe.
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VALUES OF FOREIGN COINS AND CURRENCIES.

[As given by the Director of the United States Mint and published by the Secretary of the Treasury, October 1, 1905.]

COUNTRIES WITH FIXED CURRENCIES.

Countries.	Monetary unit.	Value in U.S. gold, 1905.	Coins.
Argentina	Peso	$0.96,5	Gold—argentine ($4.82,4) and ½ argentine; silver—peso and divisions.
Austria-Hungary	Crown	.20,3	Gold—20 crowns ($4.05,2) and 10 crowns.
Belgium	Franc	.19,3	Gold—10 and 20 francs; silver—5 francs.
Brazil	Milreis	.54,6	Gold—5, 10, and 20 milreis; silver—¼, 1, and 2 milreis.
British N. A. (except Newfoundland).	Dollar	1.00	
British Honduras	do	1.00	
Chile	Peso	.36,5	Gold—escudo ($1.825), doubloon ($3.65), and condor ($7.30); silver—peso and divisions.
Colombia	Dollar	1.00	Gold—condor ($9.647) and double condor; silver—peso.
Costa Rica	Colon	.46,5	Gold—2, 5, 10, and 20 colons ($9.30,7); silver—5, 10, 25, and 50 centisimos.
Cuba	Peso	.91	Gold—doubloon ($5.01,7); silver—peso (60 cents).
Denmark	Crown	.26,8	Gold—10 and 20 crowns.
Ecuador	Sucre	.48,7	Gold—10 sucres ($4.8665); silver—sucre and divisions.
Egypt	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland	Mark	.19,3	Gold—10 and 20 marks ($1.93 and $3.85,9).
France	Franc	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Mark	.23,8	Gold—5, 10, and 20 marks.
Great Britain	Pound sterling	4.86,6½	Gold—sovereign (pound sterling) and half sovereign.
Greece	Drachma	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	Gourde	.96,5	Silver—gourde.
India	Pound sterling [a]	4.86,6½	Gold—sovereign (pound sterling); silver—rupee and divisions.
Italy	Lira	.19,3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Japan	Yen	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia	Dollar	1.00	
Mexico	Peso	.49,8	Gold—5 and 10 pesos; silver—peso and divisions.
Netherlands	Florin	.40,2	Gold—10 florins; silver—¼, 1, and 2½ florins.
Newfoundland	Dollar	1.01,4	Gold—$2 ($2.02,7).
Norway	Crown	.26,8	Gold—10 and 20 crowns.
Panama	Balboa	1.00	Gold—1, 2½, 5, 10, and 20 balboas; silver—peso and divisions.
Peru	Sol	.48,7	Gold—libra ($4.8665); silver—sol and divisions.
Philippine Islands	Peso	.50	Silver—peso, 50, 20, and 10 centavos.
Portugal	Milreis	1.08	Gold—1, 2, 5, and 10 milreis.
Russia	Ruble	.51,5	Gold—imperial ($7.718) and ½ imperial ($3.859); silver—¼, ½, and 1 ruble.
Spain	Peseta	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden	Crown	.26,8	Gold—10 and 20 crowns.
Switzerland	Franc	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Piaster	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	Peso	1.03,4	Gold—peso; silver—peso and divisions.
Venezuela	Bolivar	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

COUNTRIES WITH FLUCTUATING CURRENCIES. [b]

Country and monetary unit.	Jan. 1, 1905.	Apr. 1, 1905.	July 1, 1905.	Oct. 1, 1905.
Bolivia:	Cts.	Cts.	Cts.	Cts.
Silver boliviano	43.1	43.9	42.2	44.1
Central America:				
Silver peso	43.1	43.9	42.2	44.1
China:				
Amoy tael	70.7	71.9	69.1	72.4
Canton tael	70.5	71.7	68.9	72.2
Chifu tael	67.6	68.8	66.1	69.2
Chinkiang tael	69.0	70.3	67.5	70.7
Fuchau tael	65.4	66.5	63.9	66.9
Haikwan (customs) tael	71.9	73.2	70.3	73.6
Hankau tael	66.1	67.3	64.7	67.7

Country and monetary unit.	Jan. 1, 1906.	Apr. 1, 1906.	July 1, 1906.	Oct. 1, 1906.
China—Continued.	Cts.	Cts.	Cts.	Cts.
Hongkong tael	(c)	(c)	(c)	(c)
Nankin tael	69.9	71.2	68.4	71.6
Ningpo tael	67.9	69.1	64.8	.....
Niuchwang tael	66.3	67.4	66.4	67.9
Peking tael	68.9	70.1	67.4	70.6
Shanghai tael	64.5	65.7	63.1	66.1
Swatow tael	65.3	66.4	63.8	66.9
Takau tael	71.1	72.4	69.5	72.8
Tientsin tael	68.5	69.7	67.0	70.1
Persia:				
Silver kran	7.9	8.1	7.8	8.1

[a] The rupee, $0.3244½, 15 to the sovereign, constitutes the money of account.

[b] The coins of silver-standard countries are valued by their pure silver content, at the average market price of silver for the three months preceding the date of the circular issued by the United States Treasury Department.

[c] The "British dollar" has the same legal value as the Mexican dollar in Hongkong and Labuan.

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DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF MANUFACTURES

MONTHLY CONSULAR AND TRADE REPORTS

NOVEMBER, 1905

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MONTHLY CONSULAR *and* TRADE REPORTS

Washington, D. C. NOVEMBER, 1905 No. 302

NORTH AMERICA.

THE DOMINION OF CANADA.

VAST RESOURCES AND RAPID DEVELOPMENT.

AGRICULTURAL, COMMERCIAL, AND INDUSTRIAL PROGRESS—EXODUS FROM THE UNITED STATES—FACILITIES FOR WHEAT PRODUCTION—TRADE IN MANUFACTURED PRODUCTS—THE TARIFF OUTLOOK.

Special Agent Charles M. Pepper made a tour of the Dominion of Canada for the purpose of inquiring into conditions in that extensive and resourceful territory, and especially with regard to its trade relations with the United States and the probabilities of their enlargement. In this investigation Mr. Pepper traveled from Halifax to Vancouver. He attended the sessions of the Tariff Commission while that body was in the northwest section of the Dominion, which afforded him opportunity to meet and converse with many of Canada's leading officials and representative business men. Mr. Pepper furnished several preliminary reports upon special subjects during his journey. His final report, which is a very comprehensive and informative document, is herewith presented:

The foreign commerce of the Dominion of Canada, with an approximate population of 6,000,000 consumers and producers, for the fiscal year 1904–5 was $470,151,000, of which the imports amounted to $266,834,000. Of these imports, according to the Canadian official statistics, the United States supplied $166,000,000, a fraction more than 62 per cent. The total exports from the United States to all foreign countries during that period were $1,518,463,000. The Dominion, therefore, took substantially 11 per cent of the whole. This shows the value of the Canadian market.

In everything that relates to trade descriptions of goods, prices, samples, methods of packing, systems of credit, commercial rating, and the like, Canada, through its nearness and accessibility, may be considered a domestic rather than a foreign market. Information on these subjects, which is important in the case of more distant countries, is not necessary when it comes to the Dominion. For that reason I omit details of this character, and proceed to the consideration

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of the means by which the United States may hold its present share of Canadian trade and should increase it. This requires an understanding of the new arteries of commerce that are being opened up.

PEOPLING THE NEW NORTHWEST.

The field for growth and for the development of fresh markets lies in the new wheat regions stretching north of latitude 49° and west of longitude 96°, and commonly described as the Canadian northwest. These include the three prairie provinces—Manitoba, with an area of 73,732 square miles; Saskatchewan, 250,650; and Alberta, 253,540. In this area in the autumn of the present year the total number of inhabitants, according to the best estimates obtainable, was 1,000,000, more than 600,000 of whom lived west of Manitoba. The rapid settlement of the two newly created Provinces of Saskatchewan and Alberta is also reflected in the older Province of Manitoba, the growth there being both urban and rural. This is shown by the doubling of the population of the city of Winnipeg within seven years. In 1898 the number of inhabitants was 42,000. It is now 85,000. Smaller towns, while not exhibiting so heavy an increase, have had a very marked gain.

The sources of the population of the Canadian northwest are threefold:

(*a*) Settlers from Ontario, Quebec, and the maritime provinces of the Dominion.

(*b*) Settlers from the United States.

(*c*) Immigrants from Great Britain and continental Europe.

In the case of settlers from the eastern provinces of the Dominion and from the United States it may be said that there is a transfer of markets rather than the creation of entirely new ones. That is, the people who were accustomed to buy from local dealers in Ontario and Quebec, or in the States, have simply changed their locality of purchase. At the same time the needs of the new country have caused them largely to increase their purchases, so that the markets of the Canadian northwest, as influenced by settlers from other parts of the Dominion and from the United States, may be said to widen the demand for goods far beyond what it would have been had they remained at home. In the case of the European immigrants, there is the creation of an entirely new market.

IMPORTANCE OF IMMIGRATION FROM THE UNITED STATES.

The most important immigration into the Canadian northwest is that from the United States. The movement began in 1898–99, when 12,000 persons crossed the border. In recent years the incoming has been as follows:

Year.	Total.	From the United States.
1902	67,379	26,388
1903	128,364	49,473
1904	130,331	45,229

During the early years of the movement the larger proportion of the settlers were native-born Canadians who had been living in the

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United States and who repatriated themselves, resuming their allegiance as British subjects if they had been naturalized in this country. Then followed groups of colonists such as the Mormons, who engaged in raising beet sugar in southern Alberta, Russian Mennonites, and other sects. European immigrants to the United States who had not yet become naturalized though in some instances they had taken out their first papers, and finally all classes of American citizens, the majority of whom were native born.

At present the trend of population to Canada may be said to be a general one based on individual initiative rather than on collective association, though many groups of colonists are formed to establish themselves in a selected locality. This movement is sustained and stimulated by the Dominion government. Advertisements are published regularly in several thousand newspapers in the United States, special excursions for invited parties are run, a Canadian immigration association has been formed with branches throughout the States, and several hundred agents are paid a commission on every settler who is induced through their solicitation to move into the new country. The systematic efforts of the government are supplemented by the railroad corporations, by land companies, and by private individuals.

LIBERAL CUSTOMS REGULATIONS.

According to the statistics of the Canadian custom-houses, settlers' effects to the amount of $5,500,000 are annually admitted free. These include household goods, farm animals, and agricultural implements of almost every description. In view of the liberal construction of the customs officials in interpreting the tariff provisions, the probability is that the total valuation of goods thus withdrawn from the United States is nearer $10,000,000 than $5,000,000. The line is drawn at steam thrashers, but instances are given of steam plows and steam shovels being admitted as settlers' effects.

The Dominion government and the railroads prefer immigration from the United States for several reasons:

First. The character of the immigrants who, as a rule, are of the best class of western farmers and are the kind of people permanently to build up a new country, genuine home makers.

Second. Their superior knowledge and experience in practical farming. They not only do not have to be taught by official agents, but their methods are valuable in showing the raw immigrants from Europe the best way to get results from the wheat lands.

Third. The cash capital that they bring with them. Every arrival from the States is well supplied with money to buy land and to purchase the means of improving it. This creates an unusually active market condition for pioneer communities. The majority of the American settlers insist on acquiring a full section instead of being content with the quarter section which is allotted to homesteaders and which is more than the ordinary European immigrant is capable of handling.

PROPORTION OF PERMANENT RESIDENTS.

It should not be understood that all the settlers from the United States mean to become continuous residents of Canada. Very many of them have avowed their purpose of remaining long enough to

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improve the lands they purchase to the point where a greatly enhanced price can be secured and then to sell out and return, but it is fair to assume that this class will find other purchasers chiefly in the States, and that where one settler goes back another will come to take his place. It is not likely, however, that immigrants from the United States who are unwilling or unable to endure the long and severe winters will become permanent settlers in large numbers. The staying class will be from north of latitude 40°. Up to this time the proportion of dissatisfied immigrants from the States who have returned is not great, certainly no larger than the number of misfits who are found in every pioneer settlement.

IMMIGRANTS FROM THE STATES.

The immigration from the United States during the first nine months of the current calendar year, January 1 to October 1, 1905, is shown in the following table, received through the courtesy of the Canadian commissioner of immigration at Winnipeg:

State.	Number of persons.	State.	Number of persons.
North Dakota	4,613	Pennsylvania	216
Minnesota	5,816	Ohio	420
Montana	1,444	Colorado	192
Iowa	1,884	Indiana	345
Nebraska	819	Missouri	444
Wisconsin	1,283	Washington	690
South Dakota	947	Oregon	152
Michigan	1,252	New England States	774
New York	426	Southern States	288
Illinois	1,313	Other States and Territories	446
Kansas	428		
Idaho	316	Total	24,843
Oklahoma	335		

This rate kept up through the remaining months of the year would give a total immigration from the United States to the Canadian northwest of 33,000. This is considerably less than during the preceding two years, yet it is large enough to show that the movement is an enduring one. The proportion of the settlers who return can not be determined definitely, but very few file certificates with the United States consuls to secure the reentry of settlers' effects. Many persons do not use the railroads in crossing the long border line, and thus they avoid the formality of customs entries. This number is estimated all the way from 10 to 40 per cent of the immigrants who are regularly recorded. Unquestionably it is large enough to offset the returned settlers who are not accounted for.

DOMINATING INFLUENCE.

A deduction from the number of European immigrants to the Canadian northwest has to be made from the fact that some of these whose railroad and steamship tickets carry them to Canadian points on reaching their destination immediately buy tickets to places in the United States. In this manner they get transportation via Canada cheaper than if they bought tickets direct to the Northwestern States. The statistics of the United States immigration office at Winnipeg show that not less than 5,000 immigrants of this class annually enter this country.

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The number of incoming inhabitants from the United States in the future necessarily is dependent on various causes. Should the Dominion government limit its advertising and its other artificial means of inducing immigration there would be a decrease, though the railways and the land companies would put forth renewed efforts. Should the wheat crop meet with setbacks for two years in succession, that likewise would cause a heavy falling off in the new population. The inevitable collapse which awaits many of the wild land speculations also makes it certain that there will be at least a temporary lessening of the settlers' movement. But when allowance is made for all these contingencies the conclusion remains that while the number of immigrants has reached the high-water mark, yet for years to come there will be a normal and natural movement, and the dominating influence in the Canadian northwest as relates to markets, and possibly public affairs, will be that of the settlers from the United States.

For this reason I respectfully urge that the attention of manufacturers and shippers be given more closely to this section if they expect to hold the trade that belongs to them and to increase it in the proportion that the population grows.

TRADE THAT FOLLOWS THE SETTLER.

The effect of the Canadian tariff and the influence of the British preferential duties I shall have occasion to discuss elsewhere in this report, but it is not inapt to call attention to some of the causes which may continue the consumption of goods from the United States if the manufacturers are alive to their interests. The common rule is that the settler carries with him the preference for the goods to which he has been accustomed at home, provided this source of supply does not become too far removed from him. It is emphatically the case that trade follows the United States settler. Not only in the matter of food and clothing, but especially in the purchase of farm implements this preference has been shown. Where the relative volume has been lessened, the Canadian tariff has not been the sole cause. Binders' twine, which is free, decreased, as well as thrashers and harvesters, during the last year. It may be assumed that with a tariff ranging from 25 to 35 per cent ad valorem, the Canadian manufacturer will have the advantage in the cheaper articles and particularly those for hand labor. Wagons, hoes, rakes, spades, shovels, wheelbarrows, and similar goods are likely to be more and more monopolized by him. But in the case of thrashers, plows, and of harvesting machinery generally, no reason exists why the manufacturer in the United States should not retain his share of the market, though it will be the large concern whose output is extensive rather than the individual manufacturer.

Some falling off in the agricultural implement sales during the last year was due to the unwillingness of the American houses to extend credits beyond the safety line. An undoubted mistake of the manufacturer in the United States, and one which lost trade during the recent season, is in giving preference to supplying the home demand when it is active and in neglecting the Canadian demand. In view of the competition for this market and the tariff advantages of the Dominion manufacturer the very best business policy would be in times of unduly active demand to give the Canadian consumer the first chance, for by

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that means the trade can be held, whereas if it is neglected or made secondary through any one active season it is the more certain to be diverted permanently. The favoritism of Canadian jobbers toward home goods is also to be taken into consideration. To meet this patriotic preference more systematic commercial drumming by jobbers in the United States is desirable. In the localities where the settlers from the States are most numerous many of the country storekeepers are of the same class. They can be satisfied by American wholesalers better than by Canadian firms if proper attention is paid to their wants.

PROMINENCE OF AMERICAN GOODS.

As an illustration of the variety of goods from the United States which are in demand, I give a partial list of the articles on sale in the stores of Edmonton, the distributing center for northern Alberta and part of the Saskatchewan region: California fruits, Central American bananas from New Orleans, felt hats from Philadelphia, kitchen enamel ware from Utica, N. Y.; fine stoves from Milwaukee and high-grade ranges from Grand Rapids, fine household hardware from St. Louis, best quality handsaws from Philadelphia, shoes from Massachusetts, millinery and gentlemen's dress goods from New York City, jewelry from Maiden Lane, edge tools from Pittsburg and Cincinnati, and firearms and ammunition from New Haven. This, in addition to the agricultural machinery, which was divided between Canadian makers, branch United States concerns in Canada, and direct importations from the United States.

Again, at Calgary, the commercial, industrial, railroad, and ranching nucleus of central and southern Alberta, American goods were equally prominent. There were hay presses from Chicago, plows and wagons from Moline and Canton, Ill., wagons from Racine, high-class arms and ammunition from Connecticut (in preference to cheaper arms and ammunition from London), kitchen porcelain ware from New York, as well as from Toronto, felt hats from Philadelphia, shoes from Brockton, Mass., men's overalls from Detroit, furniture show cases from Grand Rapids, and so on. In every instance the goods displayed were of superior quality.

EUROPEAN IMMIGRANTS GOOD BUYERS.

While the United States settler is the best buyer of American goods, a mistake is made in not cultivating the European immigrant. The latter is left largely to the Canadian manufacturer, and the grade of goods he purchases is inferior, but with the American farmer as a neighbor he is a prospective buyer of American articles. I urge this point as of importance because of the certainty that the immigrants from continental Europe rather than the immigrants from the British Isles will be the most numerous element in the foreign population of the Canadian northwest.

The chief reason for this is that the British Isles have not the surplus agricultural population to spare which is necessary for peopling these new regions, and the effort to make farmers out of the artisans and mechanics and also the unskilled laborers of the United Kingdom does not give promise of success. This year a better class of British immigrants, and especially of English, Scotch, and Irish farmers, was

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reported by the officials. But the fact remains that the English immigrant is the least welcome of all the classes that enter the northwest. The farmer is unwilling to unlearn the methods of the old country and is unpopular because of his lack of sympathy with his surroundings. The farm hand is disliked on general principles. The unskilled laborer is looked upon suspiciously, and the artisan or the mechanic is certain to be unhappy in the forced evolution from his trade to that of a tiller of the soil. The hostility shown in the northwest to the Salvation Army and other schemes for establishing groups of colonists is based on experience which to the Canadian mind has proven that the English mechanic and the English "ne'er-do-weel" do not undergo transformation and become genuine farmers. Very many of them drift back to the towns and the agricultural settlements fail.

The efforts of the Dominion immigration officials are now especially directed toward securing Germans and Scandinavians. The settlers of these nationalities heretofore have come chiefly from the border States. Whether they can be drawn directly from Europe is an open question.

Of the immigrants from continental Europe the largest numbers have been from Austria-Hungary. These are mainly Galicians, who speak a Russian dialect. They make good town laborers and they do reasonably well when settled on agricultural lands under direct government supervision to teach them the methods of raising crops. They are not given the best land. These Galicians promise to be good consumers. It would be worth the while for enterprising American manufacturers to study this trade.

POPULATION AND WHEAT PRODUCTION.

The question of population in relation to the ultimate wheat production of the Canadian northwest has been raised prematurely. An animated and bitter controversy has followed the official report made by Prof. James Mavor, of the University of Toronto, to the British Board of Trade.[a] Professor Mavor gave his conclusions after an exhaustive inquiry into the possible wheat production for export, especially in reference to the feeding of Great Britain by Canada. This report was presented to the British Parliament. It is the most systematic inquiry that has yet been made, and notwithstanding that its conclusions are controverted I call attention to it because it is the basis for future investigation and for present information.

Professor Mavor gives four estimates of the potential wheat crop that can be grown in the northwest in any one year. These estimates, in bushels, are as follows:

Estimate 1 (anonymous)	253,975,000
Estimate 2 (anonymous)	357,445,000
Estimate 3 (Dr. W. Saunders)	812,000,000
Estimate 4 (H. McKellar)	1,000,000,000

The two anonymous estimates, so called, were made by well-known authorities who did not care to have their identity publicly disclosed. Doctor Saunders is the Dominion director of experimental farms. Mr. McKellar formerly was deputy minister of agriculture.

[a] The Northwest of Canada, with special reference to wheat production for export. By James Mavor, London, 1905.

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Professor Mavor indicated his leaning to the estimate of 357,445,000 bushels, though not accepting it without qualification. The Canadian preference varies between 800,000,000 and 1,000,000,000 bushels. Committees were appointed to analyze and controvert Professor Mavor's conclusions. Objection was made that he only conceded to the Province of Manitoba an ultimate production of 53,000,000 bushels, while it is to-day producing substantially that quantity and has yet large areas of land capable of cultivation. Further criticism was that he included in the semiarid regions lands which are now actually producing wheat. Nevertheless, some excellent judges of crop conditions have expressed the opinion that Professor Mavor's indication of 357,445,000 bushels may prove nearer the ultimate mark than that of Mr. McKellar or Doctor Saunders.

The dispute is of no immediate importance, because expert opinion is agreed that the Canadian northwest is now advancing toward a wheat production of 250,000,000 bushels, and the markets to be developed as the outcome of such production will answer for ten or fifteen years.

CROP ESTIMATE FOR FIVE YEARS.

For present purposes an expert estimate which fixes the yield for the next five years is sufficient. This indicates that by 1910 it may be between 150,000,000 and 160,000,000 bushels. This is the calculation made by Mr. Love, an officer of the Winnipeg Grain Exchange. In his testimony before the royal commission on transportation, given in the early summer, Mr. Love placed the number of acres under cultivation the present season at 4,150,000, an increase of 20 per cent over the previous year. He assumed that for the next five years the increase would be in the same proportion. This would place 8,580,000 acres under cultivation in 1910. An average yield of 19 bushels to the acre is assumed for the whole region, and on this basis the crop of 160,000,000 bushels, or, to be precise, 163,000,000 bushels, is calculated for 1910. Favorable seasons are presumed.

It may be said that this estimate does not take into account the difficulty of obtaining farm hands sufficient for the harvest. This is one cause which may retard the wheat production. Each season the grain growers find it more difficult to secure the labor necessary for harvesting the crop. Excursions are run by the railroads from Ontario and the eastern provinces, partly with the purpose of supplying labor and partly with the aim of encouraging settlement. It is noted that each year the number of good harvest hands who can be had for the few weeks needed grows less. It does not appear that any means have yet been devised to overcome this condition. It is the trouble that is met with in the Southwestern States, but in a more acute degree.

Considered purely in their economic aspect, the wheat areas of the Canadian northwest undoubtedly could be made to give a larger and more regular yield if they were cultivated in large holdings and to a greater extent by machinery than if the land was not broken up into homesteads and small farms. Corporations could secure the farm hands required during the brief harvest season and move them from place to place as needed much more effectively than now can be done by the individual wheat farmers. But this policy would deprive the northwest of a population of home makers. It receives no encouragement from the Dominion government or from the railway companies,

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which have the greatest interest in securing a permanent increase in the number of inhabitants. Future wheat production, therefore, is to be considered only in the sense of ordinary land holdings, with each owner cultivating an area equal to that for which he can secure harvest labor.

During the last season a new element entered into the calculation of ultimate wheat production through what was claimed to be the demonstrated success of winter wheat; that is, wheat planted in the fall and harvested three weeks before that planted in the spring matures. Phenomenal yields of winter wheat, 35 to 45 bushels to the acre, were shown in parts of Manitoba and Saskatchewan. These, however, were simply special instances. The real success was achieved in southern Alberta on lands previously given over wholly to grazing, where the variety known as "Kansas Turkey Red" developed astonishing productiveness.

The crop of the Canadian northwest for the current season as far as it can be estimated at this time (October, 1905) will be upward of 90,000,000 bushels. That is, it is approximately equal to the yield of the State of Kansas and is in excess of the crop of 1904 by 35,000,000 bushels. This marked growth in the quantity of wheat produced has been the foundation for the impetus given to immigration and to railway building. In the enthusiasm resulting from a bumper crop with the certainty of good prices, all possible drawback to the continuance of the present prosperity are ignored. The assumption is that the seasons will continue uninterruptedly favorable.

OUTCOME OF WILD LAND SPECULATION.

In the autumn of the present year the condition of the Canadian northwest might be described as one of buoyant confidence untouched by the recollection of disastrous crop years of the past. Everybody was prosperous, in debt, and buying more land. This had been going on for three years, and the overstraining of credits had alarmed the banks, though these institutions were largely responsible for it. Yet so soon as the annual apprehension of the summer frost was dispelled fresh faith was engendered. Though the farmers were abundantly able to pay up, and though urgent orders were issued by the banks to insist on collections, it is not yet shown how fully this has been done.

In the wild land speculations the average of values has been carried considerably beyond their present worth. Soils underlaid with gravel or very sandy have been sold for prices equal to the richest black loam. Lands which even with the rapid building of railroads can not be sure of transportation facilities for years to come have brought prices equal to those contiguous to the railways.

Whether this overspeculation will wear itself out without serious results, or whether it will cause a general collapse, can not be determined now. Such large areas of good wheat lands are still open to cultivation that apparently there should be no interference with the agricultural prosperity. Yet it can not be overlooked that the Canadian northwest up to the present time is essentially a single-crop country. Oats and barley are incidents. Wheat raising has been too profitable to encourage mixed farming, though the government by various measures has sought to encourage diversified agricultural industries. Even in Manitoba, where the wheat raising has been con-

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tinuous for twenty years, and where bad seasons as well as good have been experienced, very little progress has been made toward general farming, and there is still much improvident and thriftless grain growing. The inability to procure harvest hands for the single crop may secure a much larger proportion of mixed farming, but the process is a slow one.

It also has to be taken into account that in spite of a continuance of favoring natural conditions for several successive seasons, in years past the wheat growers of Manitoba have known seasons of drought, of summer frost, and even of rust. These experiences are quickly forgotten in the years of plenty, but the expert who is seeking to fix the average of production for a given period must take them into account and consider their possible effect in retarding the growth in population and the general development as relates to the future markets. These possible disastrous seasons are to be looked upon only as temporary checks, for with each prosperous year the Canadian northwest becomes the better able to withstand the effects of a bad crop season.

EFFECT OF A NEW RAILWAY CONSTRUCTION.

The Canadian northwest through the steady extension of its grain-growing area becomes the chief field of railroad building for years to come, and this railway construction is another source of population. The present railway mileage of the Dominion of Canada is between 21,000 and 21,500. While railroad building is going on in the maritime provinces and in Ontario and Quebec, the most rapid growth is in the Northwest. The probability is that for the next five years from 700 to 1,000 miles of track will be laid annually. The existing systems which traverse the wheat country are the Canadian Pacific and the Canadian Northern. Both bring the grain to the twin ports of Fort William and Port Arthur at the head of Lake Superior. These form the funnel for wheat transportation. The Canadian Pacific has begun double tracking its line between Winnipeg and Fort William, a distance of 430 miles. The Canadian Northern has reached Edmonton, 750 miles northwest of Winnipeg on a direct line. Edmonton, north latitude 53° 30′, west longitude 113° 30′, may be taken as the future railway crossroads of the new wheat regions. It is 192 miles north of Calgary, which is on the main line of the Canadian Pacific, and it will be a division terminal on the Grand Trunk Pacific. Both the Canadian Northern and the Canadian Pacific are sending out branches into the unsettled regions.

A very important factor in the transportation situation in the Northwest is the Grand Trunk Pacific enterprise. This is the proposed transcontinental line which for national and other reasons is supported by the Dominion government. Under the legislation of the Dominion Parliament the government is to build the line from Winnipeg to Moncton, New Brunswick, a distance of approximately 1,800 miles, through a region of which little is yet known as to the resources and traffic that may be developed. Part of this line when built will parallel the Intercolonial Railroad in the provinces of Quebec and New Brunswick, which is owned and operated by the government at a heavy annual deficit. When the line from Winnipeg to Moncton has been completed, it will be leased to the Grand Trunk Company for a period of fifty years. During the first seven years of the lease the

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lessee will not be required to pay rental. For the remaining forty-three years it will be required to pay 3 per cent on the cost of the line.

Though various surveying parties have been put in the field to study the feasible routes between Winnipeg and Moncton and the branches north from it, that part of the project attracts little attention at the present time. The real interest is in the lines from Lake Superior and Winnipeg west to the Pacific coast. The government guarantees the bonds of the Grand Trunk Pacific Company to the amount of $13,000 per mile through the prairie section, and through the mountain section, approximately 500 miles, without limit. The Pacific terminus of the line is to be at Kaien, about 25 miles south of Port Simpson.

The actual construction of the prairie section is now under way. The Grand Trunk Pacific selected a route from Portage la Prairie to Touchwood Hills, about 275 miles, paralleling the Canadian Pacific. The work of grading this section began in September. The sections from Touchwood Hills to Edmonton also will parallel to some extent both the Canadian Pacific and the Canadian Northern lines. Nevertheless where new regions are not opened up the effect undoubtedly will be to stimulate wheat growing by increasing the means of competitive transportation.

Though one of the reasons of national policy for the government taking hold of the Grand Trunk Pacific enterprise was to afford a grain outlet to the Dominion ports on the Atlantic by an all-rail route through Canadian territory, yet for years the Grand Truck Pacific hardly can be considered otherwise than as a transportation line from the wheat regions to the western ports of Lake Superior, and therefore its construction is closely identified with the immediate development of those sections.

HUDSON BAY LINES DEPENDENT ON NAVIGATION.

Collateral to the railway building in the Northwest are the projects for reaching Hudson Bay. These from the engineering point of view are entirely practicable, and offer no objections that do not apply to all subarctic railways. The western provinces have given frequent indorsement to the plans for railway construction to York or Fort Churchill, and as they grow in population and resources they will be willing to extend aid by subsidies. The steamship route from Fort Churchill to Liverpool is approximately 3,000 miles. It is therefore apparent that if water transportation is feasible a large quantity of the grain which the Canadian northwest exports to Great Britain would find by far the cheaper outlet through Hudson Bay instead of through the Great Lakes, or by transcontinental railways to Montreal and Halifax. The question is yet undetermined whether on account of the ice packs navigation through Hudson Bay for a period of ninety to one hundred days is practicable.

If it should be demonstrated that navigation can be assured, the plan of building elevators for wheat storage at Fort Churchill or other Hudson Bay points might receive financial sanction; but until the certainty of this navigation can be established not much is likely to be done in the way of railroad extension. The same lack of knowledge exists with regard to James Bay, at the lower end of Hudson Bay,

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which can be easily reached by the extension of the Temiscaming railway that the Province of Ontario is building northward from North Bay in order to open up the mineral and timber resources of that region.

FUTURE TRAFFIC THROUGH THE UNITED STATES.

An issue of the near future is likely to be the success of artificial measures in preventing the natural flow of traffic from the Canadian northwest southward across the border into and through the States as the best means of export. Interests identified with the Great Northern and the Northern Pacific railways, after much opposition, secured concessions for constructing a railroad from Vancouver through southern British Columbia east. Similar interests have concessions for lines in Manitoba. During the season of 1904, when the crop in the Western States was short, Canadian wheat in bond was admitted into the United States for milling and the shipments from Winnipeg were heavy. Some grain for export also was carried in bond. With the increase in the wheat growing, and notwithstanding the enlarged means of transportation to Fort William and Port Arthur, which now have an elevator capacity of 50,000,000 bushels, it is still a question whether a large amount of traffic might not be created for American lines by transporting this wheat in bond either for milling or for export.

Though the national policy of the Dominion opposes this method and seeks to force all the traffic directly east instead of letting it follow natural routes south and east, the large immigration from the United States may be a counterbalancing influence. There is also the identity of capital in railroad companies on both sides of the border. This capital in seeking returns is not apt to let sentimental reasons stand in the way of the advantages which geography gives. The possibility of traffic being diverted from the all-Canadian routes is discussed with some anxiety by Dominion experts.[a]

EXTENT OF IRON AND STEEL INDUSTRY.

The leading industry in Canada, both in point of consumption and of production, is that of iron and steel. In 1904 the yearly consumption of iron and steel and their products was between 800,000 and 820,000 tons.[b] For the calendar year 1905 it reasonably may be placed at 1,000,000 tons. Again, the extent of the consumption of iron and steel products may be measured by the importations. For a period of three years these have been $42,000,000 annually, the dutiable imports being approximately 75 per cent of the whole. The close relation of the United States may be understood when it is stated that for the fiscal year 1904–5 the total iron and steel imports into Canada from this country were $34,263,000, of which $24,850,000

[a] The results of this new feature of our trade in grain will naturally be closely watched, for should the trade expand to any considerable extent it will undoubtedly affect our transportation companies directly and cause to a more or less extent some rearrangement of the present method of selling and handling the grain. It is safe to say that every bushel of grain in this way diverted to the south will mean a loss to Canada through such grain not being handled at Canadian ports and by Canadian steamboats and railroads. How far our farmers will be benefited seems as yet to be problematical. (Annual Report Winnipeg Board of Trade, 1905.)

[b] Statistical Yearbook, Ottawa, 1905.

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were dutiable and $9,413,000 free. Great Britain supplied $5,437,000 dutiable and $1,173,000 free; all other countries, $1,177,000 dutiable and $314,000 free. Nearly 81 per cent is thus supplied by the United States.

Of unusual importance is the effort of Canada to build up her own iron and steel industries. These efforts have been continuous and systematic, extending through a period of twelve or fifteen years, and including aid from both the Dominion and the provincial governments. The first measure related to the production of pig iron. In 1883 the Dominion Parliament authorized the payment of a bounty upon all pig iron manufactured in Canada. After this there were a series of measures granting bonuses and providing for a graduated scale. Provision was also made for a bounty of $3 per ton on steel ingots manufactured from ingredients of which not less than 50 per cent of their weight consisted of pig iron made in Canada, the same amount on puddled iron bars fabricated from Canadian-made pig iron, $3 per ton on pig iron manufactured from ore mined in Canada and $2 on the proportion produced from foreign ore. The act of 1903, with subsequent amendments, provided for the payment of bounties on rolled wire rods of $6 per ton; on rolled angles, beams, joists, or bridge building, or structural rolled sections, and on rolled shapes, $3 per ton; and rolled plates, $3 per ton, the articles to be manufactured in Canada from steel produced in Canada from ingredients of which not less than 50 per cent consisted of pig iron made in the Dominion. This act also provided for a gradually lessening scale of the bounties authorized by the act of 1897, so that in the year 1905–6 they should be equal to 55 per cent and in 1906–7 to 35 per cent of the bonuses granted in that act.

The Province of Ontario also provided for a bounty of $1 per ton of pig metal from iron ores raised or mined and smelted in that Province, the amount so paid not to exceed in any one year $25,000. Payment began under this bounty in 1894 and continued for ten years. In the year 1904 the total bounties paid by the Dominion government on pig iron made from Canadian ore was $125,000, and from foreign ore $408,000, a total of $534,000. The bounty paid on steel ingots was $348,000 and on puddled bars $12,000. Of the articles manufactured from steel, including round steel wire rods and rolled angles, the amount was only $15,000. In the period from 1895 to 1904, inclusive, the Dominion bounties aggregated as follows: Pig iron, $3,024,201; puddled iron bars, $99,591; steel, $1,568,447.

LIBERAL AID TO RAIL PRODUCTION.

The measures for encouraging the production of steel rails had their beginning in the law passed by the Dominion Parliament in October, 1903. This act provided for a duty of $7 per ton upon all iron and steel railway bars or rails, in any form for railways imported into Canada, whenever the governor-in-council should be satisfied that steel rails of the best quality suitable for the use of Canadian railways were being manufactured in Canada from steel made in Canada in sufficient quantity to meet the ordinary requirements of the market. Ten months later, in August, 1904, the government promulgated the order putting the duty into effect subsequent to November 30, 1904. In addition to this duty was the supplemental legislation known as the "antidumping clause" which gave additional protection.

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The companies engaged in steel-rail making claimed that they were entitled to the bounty provided for structural steel. The Algoma Steel Company put in a claim for this bonus and $60,000 was paid under it. Then the Dominion government disallowed the claim and took measures to recover the amount paid. The contention is still pending as to the meaning of the act of Parliament, but it may fairly be assumed that no further direct bounties will be paid on steel rails. However, for the current fiscal year the bounties upon pig-iron and steel ingots under the sliding scale will amount to $3.30 per ton upon the steel which is used in the manufacture of the rails.

The two chief steel industries of Canada are located at Sydney, Nova Scotia, Cape Breton, and Sault Ste. Marie, Ontario. The Sydney works are known as the Dominion Iron and Steel Company. The works began with the manufacture of steel billets, which at first were exported in moderate quantities both to Great Britain and the United States, while a certain tonnage also was sold to Canadian rolling mills. The company's financial history has been a vivid and checkered one, not dissimilar to other experimental enterprises in which a large outlay of capital is required. One advantage claimed for these works was the location at tide water, which would insure a phenomenally cheap production of pig iron, and not only would enable the maritime and upper Provinces of the Dominion to be supplied, but also the New England States. The latter idea is no longer entertained and the industry now is considered entirely with reference to the Canadian market. The expectation of very cheap pig iron has not been realized.

CAPACITY AND OUTPUT.

The company owns extensive ore beds in the Wabana Range at Belle Isle, Newfoundland, and coal deposits are located convenient to the works in Nova Scotia. Some ore is imported from Sweden, Spain, and the Lake Superior region for mixing purposes, but the Newfoundland beds are the chief source of supply. The process employed is the open hearth. The most serious drawback is in the expense of procuring coke, the Nova Scotia coal deposits having a large amount of sulphur and expensive washing processes being necessary for the coal. The resultant coke is not considered equal as a metallurgical fuel to that available for western Pennsylvania furnaces.

The Sydney works, in October of the present year, were represented to be in a very flourishing condition. The wire-rod mill having been firmly established with a good home demand for its output, the company was bending its energies to turning out as rapidly as possible steel rails, the daily output reaching 500 tons, with occasional records considerably higher. These rails, with the wire, billets, blooms, slabs, and pig iron, provided a daily shipment of 15 to 20 cars of product to western Nova Scotia, New Brunswick, and upper Canadian Provinces. All departments of the works were running on full time with double shifts. Three blast furnaces were in operation, with a daily output of 750 to 900 tons. The wire-rod mill, when operated to its full capacity, can turn out 150 to 200 tons of rods each twenty-four hours. The ore importations from Newfoundland were about 10,000 tons per week, while some small cargoes were received from the Province of Quebec and a few thousand tons of higher grade mixing ores from foreign countries.

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The Nova Scotia Steel and Coal Company, located at Sydney Mines and Ferrona, which does not manufacture rails, had one new blast furnace in operation at Sydney Mines producing about 150 tons of pig iron daily, and also three open-hearth furnaces. Steel from the latter is shipped to the company's works at Trenton and New Glasgow, where it is rolled into various finished forms. These works also get their ore chiefly from the Wabana Range, in which the company has extensive properties. In the summer of 1905 it made extensive purchases of the submarine areas north of the Wabana deposits, and roughly estimates the ore to be won from these at 100,000,000 tons, though drilling to establish their extent is yet to be done.

In October, according to information given, the Dominion Iron and Steel Company had between 2,900 and 3,000 employees on its rolls, the semimonthly pay roll amounting to $80,000.

The Nova Scotia Steel and Coal Company had 2,000 men employed in and about its coal mines and 600 in the iron and steel plant.[a]

STRATEGIC POINT FOR SUPPLYING RAILWAYS OF THE NORTHWEST.

The Algoma Steel Company, at Sault Ste. Marie, Ontario, is the name of the subsidiary enterprise, under which blast furnaces and steel works are operated in a series of industries which include a pulp mill, a railroad, a hotel, iron-ore and nickel beds, and very extensive water rights and plants erected for the transmission of power to various lessee companies. The financial history of this enterprise, when it was known as the Lake Superior Consolidated, became disastrously familiar to American and British investors. Because of the association of interests it was not easy to establish the separate value of the steel plant or accurately define its relation to the entire chain. The idea, however, was that the location on Lake Superior was the great strategic point for supplying the railways of the Canadian northwest with rails. It was assumed that these works would control the situation. The company owns the Helen and Josephine mines, in Ontario.

When the failure of the Lake Superior Consolidated seemed most complete the Province of Ontario came to the rescue and guaranteed a bond issue of $2,000,000. Under this stimulus the steel mills went forward with the production of rails and a heavy order was secured from the Canadian Pacific, which was concluded in September very satisfactorily, and the mills now are reported to be turning out upward of 300 tons per day to fill other orders. The number of employees is about 1,200. The foundry has not been opened yet.

ORE AND COAL FROM THE UNITED STATES.

Though the works at the Soo have tributary iron mines, they import their Bessemer ores from Minnesota and ship to Lake Erie ports for use in Ohio and western Pennsylvania furnaces the non-Bessemer ores from their Helen mine, the Josephine not being worked. The coal used at the Soo works is imported from Lake Erie ports of the United States, and is of Pocahontas and similar high grades. Coke is bought at present, but a coke plant is to be built which will be supplied with the West Virginia and other coals. The latter, as is well known, do

[a] Information regarding the works at Sydney and Sydney Mines furnished by American Consul West.

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not require the expensive washing which is necessary for the Nova Scotia coals. It is to be observed in the case of the Soo works that while there is a marked strategic advantage for supplying the Canadian Northwest with rails, most of the raw material is assembled from points in the United States, the iron ore from Minnesota and Michigan and the coal from West Virginia and Pennsylvania.

The future of the iron and steel industry in Canada is involved in a number of problems not yet fully solved. It may be presumed that the Newfoundland government will put no difficulties in the way of exporting iron ore from Belle Isle, and the ownership of the Wabana Ranges assures a supply of a certain character to the Dominion and the Nova Scotia companies. That too much dependence can not be placed on the Nova Scotia or Cape Breton deposits of iron ore may be inferred from the fact that though the bounty on pig iron produced from native ore is 50 per cent greater than on that from foreign ore, neither of the above companies makes extensive use of the native ore. The output from the Nova Scotia deposits decreased from 84,000 tons in 1895 to 40,000 tons in 1903. In Ontario, which includes the Soo, the total production of iron ore in 1903 was 209,634 tons, of which 153,500 were exported. In 1904 the output was 273,000 tons, of which 169,000 were exported.

It is generally agreed that the industries already established must continue to depend largely on government support, and the continuance of the duty on steel rails may be regarded as certain. Whether the bounties on pig iron and structural steel will be kept up is yet to be determined. The works at Sydney, according to a statement made in the Dominion parliament, from 1901 to 1904 received bonuses to the amount of $1,721,000.[a]

The estimates of the steel rails that will be needed for the next five years are widely apart, but the majority of railway managers seem to agree on 150,000 tons as certain to be required annually, with a possibility of exceeding 200,000 tons once or twice.

NATURAL HANDICAPS.

The building of blast furnaces and steel works, which made the present steel-rail industry of Canada possible, was attended by a scale of expenditure most distressing to the stockholders. Rail manufacture in the Dominion is yet far from reaching the perfection in organization and economy in production which have been attained by the plants in the United States. For many years this must be considered as a handicap in the effort to develop an exclusively Canadian iron and steel industry to supply the Canadian market or to compete with the United States. It is also the belief of many expert authorities that the lower-grade ores and poor coal, with the difficulty of access to it for most sections, constitute a permanent drawback to Canadian iron industries, so that their costs will be considerably above those in the United States, and that a high tariff always will be necessary in order to keep out steel from this side. No Canadian steel works can produce cheaply in comparison with any of the leading steel-making countries of the world.

The possibility of cheapened production through new processes has not been demonstrated. The government granted an appropriation

[a] Sir R. Cartwright, quoted in the Canadian Annual Review.

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for Doctor Heroult's electric steel-making experiments at the Soo. These may result in something of value to the Canadian steel industry, but up to this time his process has been employed abroad in the manufacture of limited quantities of tool steel and steel for uses which do not involve any large tonnage. There is as yet no basis for the expectation that the electric process will afford any measurable compensation to Canada for the absence of desirable metallurgical fuel. It should be stated, however, that Doctor Heroult, in newspaper interviews, has expressed himself very confidently, stating that under favorable conditions pig iron can be made for $10 per ton, while steel will cost only about $4 per ton more to produce. He is quoted as saying that the iron resources of the Dominion are vast, in quantity three times as much as Sweden, which has ore sufficient to supply the markets of the world for a hundred years.

WHAT CONSTITUTES CANADIAN RAW MATERIALS.

Raw materials entering into the manufacture of iron and steel articles by Canadian workmen, as construed by the Dominion government, are pig iron, bar iron, rolled or hammered, boiler plate, steel bloom ends, rolled iron for horseshoe nails, steel for skates, files, or saws, wrought scrap iron, etc., and parts of articles in other respects manufactured in the United States.

The relation of iron and steel imports from the United States and the tendency to increase or decrease are exhibited as follows:

Articles.	Class.	1904.	1905.	Increase (+) or decrease (−).
Agricultural implements	Dutiable	$2,615,000	$1,571,000	−$1,044,000
Hardware (builders' and cabinetmakers')	do	663,000	587,000	+ 76,000
Iron or steel sheets	do	507,000	710,000	+ 203,000
Iron in pigs	do	450,000	655,000	+ 205,000
Machinery and machines	do	6,886,000	5,769,000	− 1,117,000
Do	Free	1,000,000	1,203,000	+ 203,000
Steel rails	Dutiable	137,000	233,000	+ 96,000
Do	Free	1,261,000	[a] 4,517,000	+ 3,256,000
Tools and implements	Dutiable	1,110,000	1,086,000	− 24,000
Tubing	do	899,000	978,000	+ 79,000
Do	Free	99,000	122,000	+ 23,000
Other manufactures of iron and steel	Dutiable	10,976,000	13,259,000	+ 2,283,000
Do	Free	3,158,000	3,571,000	+ 413,000

[a] Rush importations to anticipate duty of $7 per ton effective November 30, 1904.

The Canadian manufacturers of wire products are still very largely dependent upon the United States. Recognizing this, the Dominion tariff provides for the free introduction of steel in various forms, partly fabricated either free or at a very low rate. This includes flat-strip and flat-steel wire, plain strip fencing, etc. Some wire-drawing plants have been established and also several for making wire fencing. Barbed wire and galvanized wire for fencing are admitted free. In the mining regions of British Columbia wire cables for aerial tramways manufactured in St. Louis are preferred to the Montreal product.

Several manufactories of wire nails have built up a profitable business, but these draw very largely on the United States for their raw material. They have not yet been able to monopolize the home market for nails, the importations from the United States during the last fiscal year amounting to $693,000.

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Canada has thus far made little progress in crucible steel. That competition is between the United States and Great Britain, and is likely to continue so.

HARDWARE AND TOOLS.

With reference to hardware, there are now several Canadian factories that undertake to manufacture the newest designs, both pressed and cast, but they are not able to displace American novelties. Fine tools from the United States in pattern and finish are preferred by the Canadians to the European articles. However, the German manufacturers, in spite of the surtax, imitate many of the latest American designs in tools and novelties. They also hold a very large share of the cheap cutlery trade, even as against Great Britain. In the manufacture of wheelbarrows and scrapers the Canadians have been able to supply the demand. The steel sheets are from the United States.

In the manufacture of stoves the United States has nothing to expect in the cheaper grades, but on fine ranges it is able to compete and to hold a profitable market. This is in line with what experience has shown; that is, that manufacturers in the United States can keep their share of the Dominion trade by increasing the quality of their product as fast as the Canadians get the home market for the cheaper articles.

A pointed suggestion may be made regarding trade methods. The United States lost business in iron and steel products through the resentment of the Canadian jobbers at what they considered the intolerant practices of the American manufacturers. They objected to the attempt to dictate in the sales agencies and to deprive them of the privilege of competitive buying. On this account they were the more anxious to encourage their home manufacturers, even where quality and price were not so good as on the articles from the United States. The American shovel manufacturers also lost a permanent Canadian trade by agreeing several years ago to accept a cash bonus and stay out of the Dominion market. The result was that when they wanted their share in this field they found the Canadians had it well under control.

CANADA'S ABILITY TO CLOTHE ITSELF.

As concerns textiles, the claim is made that within a few years Canada will be able to clothe itself. If this should prove correct, it would cut off considerable trade from the United States, but a larger volume from Great Britain. While the Dominion is making advances in the textile and kindred industries, the time seems to be distant when the importation of foreign goods will cease.

The basis of such a result would lie in the expansion of the woolen manufactures. The only growth that this industry has received has been from the settlement of the new northwest, where the demand for coarse woolen blankets may be depended on to increase. The duty on blankets of this class is 35 per cent ad valorem. Under it the Canadian mills have been enabled partially to supply their own market. In Nova Scotia some of the mills have manufactured and successfully marketed a fine grade of tweeds. At Moncton, New Brunswick, a woolen mill, by making its products up into cloth ready for the tailor, also has established a fair custom, but generally the Canadian woolen industry is not prosperous, and the subject is one that is constantly

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agitated in the Dominion parliament and by the manufacturers who want increased duties.

This country has made no aggressive effort to capture the Canadian woolen market, though raw wool is imported from the Dominion for the New England mills. France has the trade in the fine wool or worsted fabrics and in women's dress goods of the same grade. The United States has a few exports of flannels and knit-goods underwear. Germany, in spite of very heavy discriminating duties, largely supplies the latter trade. The United States is able to supply felt cloth, ordinary underwear, women's outside garments, some shoddy, and a large amount of ready-made clothing. The latter market is one that especially favors further cultivation. In the stores of Toronto and elsewhere the semiready or ready-made garments from the States are bought in preference to those of home manufacture. They are more stylish or of better quality, and are moderate priced, within the means of a large body of consumers.

SOURCES OF WOOLEN SUPPLY.

The complaint of the Canadians, whose manufactures are restricted to the cheaper grades of woolens, is that they have to meet increasing competition of cheaper British goods due to difference in wages, cost of wool, dyestuffs, etc. The preferential tariff in favor of Great Britain was modified to meet these conditions, but the objection is that the preference is still too great, and the Canadian woolen manufacturers are demanding increased protection when the tariff shall be revised in 1906. Against this contention importers and jobbers of British-made woolens will ask for lower duties on the classes of goods not manufactured in Canada. Representatives of the Yorkshire manufacturers who investigated the subject found that the only extensive use of Canadian woolens was in the ready-made trade. They therefore concluded that the Yorkshire woolens, which are used by tailors who make suits to order, are in no immediate peril of being displaced. Linens are in even less danger. It is also doubtful whether the ready-made goods from the United States can be dislodged unless the tariff is made prohibitive. The imports of cassimeres, doeskins, coatings and overcoatings, and tweeds from Great Britain have been one means of keeping up its percentage of the whole volume of Canadian trade.

Felt hats of a fair quality manufactured in the United States find an excellent market, since Canada has made little progress in this direction. The preferential tariff gives the British hat makers an advantage, yet manufacturers in the United States have been enabled to build up a market, particularly in the northwest. They also have a profitable field in the straw-hat trade during the summer.

COMPETITION IN COTTONS.

The cotton industry of Canada had its beginning in 1878. Large mills were established and much capital sunk in the effort to maintain them. After the tariff of 1897 was put in force there was a revival of the cotton industry, with wavering success In the summer of 1905 a combination was effected of a majority of the mills, with headquarters in Montreal. Under this combination it is claimed that the industry is now on a solid foundation, though some further increases

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of tariff duties may be asked. The duck mills have been especially successful. The raw cotton to the amount of $5,000,000 to $6,000,000 yearly is imported directly from the United States, but this country also has a share in the market of manufactured goods. The imports from the United States for the fiscal year 1904–5 were as follows:

Duck, gray or white	$43,000
Gray, unbleached	30,000
White or bleached fabrics	226,000
Printed, dyed, or colored fabrics	402,000
Jeans and sateens	83,000
Knitting yarn, hosiery yarn, etc	36,000
Shirts of cotton	138,000
Cotton clothing	341,000
Blouses and shirtwaists	28,000
Cotton bags	46,000
Socks and stockings	20,000

The United States product which finds a market is successful largely because of attractive patterns. This is especially true of shirtings. The Canadian goods have a heavy nap and this gives them some advantage over the British-made goods. Great Britain is likely to lose part of its market for the coarser grades, but since the United States has not entered into this competition there is no reason why its exports to Canada of cotton manufactures should not increase.

BOOTS AND SHOES IN DEMAND

So many instructive reports on the Canadian boot and shoe trade have been made by the consuls of the United States, and they have set forth the value of the Canadian market so clearly, that I confine myself to a few general observations. Though progress has been shown in the establishment of the boot and shoe industry, especially in the province of Quebec, and though this has increased the market for American machinery, there is nothing yet to indicate that the Canadian trade can be closed to the United States. The reason is that the manufacturers in the States through their ability to specialize are enabled to meet every demand as to quality, lasts, and individual liking. The Canadian shoe manufactories, through the limited demand and through manufacturing solely for the home market, are unable to specialize, and a plant, once established, undertakes to make everything from ladies' fine shoes to cowhide boots for the lumber regions. Against this is the factory in the United States which puts out a single line of goods and which is enabled to meet the requirements in that line in a manner that can not be met by a factory which lacks the latest and best machinery and the other facilities. The subject has received much attention in the Dominion, and though ample protective duties are provided there is no serious idea that American boots and shoes can be shut out. It rests with the manufacturers in the United States as to how thoroughly they shall enter into competition for this market.

Some proportion of the raw material for the Canadian shoe factories is also imported from the United States. This is in the form of sole leather and upper dressed leather. The customs figures are not a reliable guide as to the amount of boots and shoes sold in Canada, for along the border from St. John, New Brunswick, to Detroit, and even farther west, very large purchases are made by Canadians, who buy in the American cities and return home wearing their new footgear.

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The value of the boots and shoes from the United States which were entered at Canadian custom-houses in the last fiscal year amounted to $1,107,000.

A general statement may be made with regard to the Canadian market for wearing apparel, dry goods, millinery, and boots and shoes. This is that the styles are taken from New York and other American cities and not from Europe. Fashions that are popular in New York are certain to be popular in Canada. Neither sentimental considerations about goods "made in Canada" nor political affiliations with the British Empire changes this fact. The Canadian wears, or prefers to wear, goods of similar quality, style, and pattern to those worn in the United States. For the American manufacturers the question in these goods is simply to meet the wants of the 80,000,000 consumers at home plus 6,000,000 across the border, and to give the Canadians prompt benefit of the latest novelties.

AGITATION FOR DUTY ON ROUGH LUMBER.

Canada's importations of furniture and manufactures of wood from the United States on which a duty is laid is upward of $1,000,000 annually. The value of the other grades of lumber which are dutiable in the last fiscal year was $1,185,000, the quantity being 116,500,000. The value of the lumber on which no duty was laid was $5,953,000. These figures are important because of the movement of the British Columbia Lumbermen's Association, supported by the Canadian Manufacturers' Association, to secure a duty on American rough lumber imported into Canada equal to that laid by the United States on Canadian lumber imported into this country; that is, $2 per thousand. The object of the proposed duty is to give the Canadian lumbermen control of the market in the northwest. An estimate made by the British Columbia Association is that each settler buys annually 3,000 feet. If they can not secure an equivalent duty the aim is to obtain a tariff impost of some kind so that the lumber shipments from Washington and Oregon may be brought within the provisions of the anti-dumping clause.

The export of logs from Ontario is forbidden by that Province. Similar measures have recently been taken by the Province of British Columbia, which has prohibited the export of logs taken from the Crown lands. As against this action it may be noted that lumber mills in the Winnipeg district are taking logs from Minnesota in preference to those cut from the Canadian forests. The reason is said to be the desire to use up the Minnesota forest reserves before any duty is laid on logs imported into Canada, though this policy has not received the sanction of the Dominion government.

FACTORS IN THE DOMINION'S PROSPERITY.

Canada has enjoyed a period of uninterrupted industrial prosperity for several years. The basis of this prosperity has been chiefly the opening of the new wheat lands in the Northwest, supplemented by increased agricultural and forest development in the older provinces and by more systematic exploitation of the mineral wealth of districts as widely separated as British Columbia and Ontario. The total production of Canada for 1904–5 was $1,100,000,000; the output of the

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factories, with an invested capital of $500,000,000 and paying wages to the amount of $100,000,000, was $650,000,000.[a]

With increasing agricultural production to enlarge the purchasing capacity of the people a group of causes may be taken as the basis of the marked development of Canadian manufactures. These are, first, protective tariff duties; second, new development of water power, and especially its application through electrical energy; third, the desire of foreign manufacturers to protect their Canadian patents by manufacturing within the limits of the Dominion, as required by the patent laws; fourth, nearness to the consumer; fifth, to enable advantage to be taken of preferential colonial tariffs.

CAPITAL FROM THE UNITED STATES.

The chief contributing cause to the building up of the Canadian industries has been United States capital. This appears in various forms. In the case of many industries substantially all the capital is from the States, though the companies are Canadian corporations. In other cases the capital is Canadian, while the industries are managed by parties from the United States and the articles are duplicates of those manufactured in the mills of this country. In many instances of this kind after a few years both the management and the capital pass entirely into Dominion hands and only the firm name or the trademark is retained.

No trustworthy calculation can be made of the amount of capital actually transferred from the United States to Canadian industrial enterprises during a given period. An estimate prepared by a Montreal bank manager of the American investments in that city, the commercial capital of the Dominion, fixed the maximum at $25,000,000 during the last five years, though $75,000,000 had been claimed. It is not, however, the actual amount of the capital that is so important as the fact that the United States has a direct or an indirect interest in so many Canadian concerns and the money is constantly flowing back and forth, some of it in the form of dividends from branch factories and probably a larger proportion in the form of purchases of raw material and factory supplies.

MACHINERY INSTALLATION BY THE UNITED STATES.

One striking fact is apparent, and this helps to explain why the imports from the United States have increased in spite of the steady development of Canadian industries and their partial success in supplying the home demand. Not a factory of any kind is built in the Dominion that the installation is not made very largely from the United States. This was the case with the steel works at Sydney and Sault Ste. Marie. The electrical works at Hamilton are a speaking catalogue of manufacturers of hoists, cranes, and machine tools on this side of the border. It is the case with the flour mills which are building in order to keep pace with the increased wheat production of the Northwest. It is also true of the lumber mills. In mining machinery the United States may almost be said to have a monopoly, and the great smelters are its contribution to Canadian progress. So long as Canada

[a] Address of Hon. R. L. Borden, Manufacturers' Association, Quebec, September, 1905.

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continues to build new mills and establish new industries the installation of the plants will be done largely by the splendidly equipped engineering works of the United States.

An illustration from British Columbia is pertinent. A saw factory was established in Vancouver to meet partially the demand created by the local lumber mills. This factory draws its supplies as follows:

Steel plates, Washington, Pa.; grindstones, Cleveland, Ohio; milling machinery, Seattle, Wash.; saw gummers, Tacoma, Wash.; saw anvils, Trenton, N. J.; blanks for band saws, Brooklyn, N. Y.; drill presses, Worcester, Mass.; fire bricks, Troy, N. Y.; bits and shanks for inserted tooth saws, New York City; saw swages and shapers, Big Rapids, Mich.

The establishment of branches of American factories on Canadian soil is not recent, but the movement has been very marked during the last five years for the causes noted above. Many of these enterprises draw not only their prime raw material, but machinery parts and partly fabricated material from the factories in this country. This is shown particularly in branches of the iron and steel industry.

DISTRUST OF MUNICIPAL BONUSES.

In view of the incentive given to establish industries not only by the Dominion government through bounties and by the provinces through bonuses and guaranties, but also by the municipalities, a question has been raised whether a reaction must not be looked for. It is a fair statement that many enterprises have been overstimulated and that when the artificial props are removed, as some of them must be, a period of depression will follow. This does not relate to the well-established industries, which have ample reserve capital and have been enjoying unexampled prosperity. The danger feared is from the breaking of the chain of minor concerns that have been brought into existence through municipal aid in various forms.

Promoters from the United States have found a fertile and up to this time a profitable field in starting industries in the municipalities which would extend the greatest aid to them. Free grants of land, exemption from taxation for a long series of years, guaranties of bonds, loans of money, and, in some cases, outright cash subsidies were required. In one instance, which could be duplicated scores of times, the ratepayers were asked to vote a comparatively small industry a substantial cash loan for twenty years, a free site, railway switches, and cheap water supply. A carnival of competition among communities, particularly in the Province of Ontario, has been going on to secure the location of new companies, and often plants have found it advantageous to remove from one place to another merely to obtain the bonus. Very many of the enterprises have not got beyond the point of promotion and stock flotation, but the municipalities have been committed to them and have loaned their credit.

This condition is viewed with considerable distrust by conservative financiers, but apparently there is no means by which the different localities can be checked in their reckless rivalry. The collapse of very many of these municipally aided plants will be the first result of even a short period of depression. This may happen without serious harm to the much larger number of industries which are on a solid foundation and depend only on their own capital. Yet when the fail-

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ure comes, acute distress will be caused to many communities and the working back to a healthier condition will be a painful process.

PURPOSE OF ANTIDUMPING CLAUSE.

In their competition with the manufactured products of the United States Canadian industries have the benefit of incidental protection additional to that which is contained in the tariff duties. This is through a special duty levied under what is known as the antidumping clause, and which is aimed at export price lists of foreign manufacturers. This clause was made effective in 1904. Under it goods of a class or kind made or produced in Canada are subject to special duty, when the export price or actual selling price to the importer in Canada is less than the fair market value thereof as sold for home consumption in the ordinary course of trade and on the usual credit terms in the country of export.

This special duty is the difference between such fair market value and such selling price, but is not to exceed one-half of the ordinary customs duty otherwise established in respect to the goods. It does not apply to goods on which the difference between the fair market value and the selling price of the goods to the importer in Canada does not exceed 5 per cent of their fair market value. There is a further limitation in respect to iron and steel products, except round rolled wire rods not over three-eighths of an inch in diameter, whose manufacture in Canada is aided by bounty. On these articles, pig iron, billets, structural shapes, etc., the special duty shall not exceed 15 per cent ad valorem nor more than the difference between the selling price and the fair market value of the article. The exporter is required to make an invoice of goods shipped to Canada under a form prescribed by the Canadian customs authorities.

It is claimed that this antidumping clause has been very effective in preventing the unloading in the Dominion of surplus stocks and of slaughter sales, yet this contention is not universally upheld. In the testimony before the tariff commission at Winnipeg the assertion was made that it had just the opposite effect on a number of articles.

MAXIMUM AND MINIMUM TARIFF IN PROSPECT.

The proportion of merchandise imports from the United States for the fiscal year 1904–05 was $73,634,000 free, and $78,797,000 dutiable.[a] It may be taken for granted that Canada will continue to import coal for the Province of Ontario, iron ore, mineral oils, raw cotton, tobacco, etc., and a certain proportion of live animals and food products. The efforts of the American manufacturers must be to hold their present trade in articles effected by tariff schedules and to increase that trade proportionately with the growth of Canada. For this reason the revision of the Canadian tariff, which it has been officially announced will be made by the Dominion Parliament in 1906, becomes important.

At the outset attention should be called to the fundamental difference in the methods of fiscal legislation in Canada as compared with the United States. In the Dominion the government, that is to say, the responsible ministry with a majority of the Parliament sustaining it,

[a] Unrevised statistics, monthly report, Department of Trade and Commerce, Ottawa, June, 1905.

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formulates the tariff bill. This measure is presented by the finance minister at the afternoon sitting of the Houses of Parliament. But in the meantime its provisions have been telegraphed to every customs collector in the Dominion and the new schedules are in effect from the opening of the custom-houses that morning. Such alterations or modifications as are made in the measure after its introduction usually are trifling and the readjustment of duties under schedules that have been changed is easily accomplished.

In view of this system of fiscal legislation it fairly may be assumed that when the revised tariff is submitted to the Parliament, in 1906, its provisions will not be materially changed. The policy of the government therefore becomes of unusual importance. This policy, as announced by the minister of finance in a speech at the last session, is for a maximum and minimum tariff, probably with only an arbitrary relation between the two scales of duties, and for the continuance of the present British preferential tariff. It has been intimated, though no authoritative announcement has been made, that the British preference will be based on the minimum tariff. That is, merchandise imported from the United Kingdom or from the British Colonies which give the Dominion a preference will pay duties 33⅓ per cent lower than the countries which have the minimum schedules.

As a preliminary to the tariff revision a government commission was appointed and began its hearings at Winnipeg in September. These hearings have brought out the usual variety of conflicting views as reflected by local conditions. In the Northwest and in British Columbia the general trend of the testimony has been against an increase of duties.

ATTITUDE OF CANADIAN MANUFACTURERS' ASSOCIATION.

A very powerful influence in favor of higher duties is the Canadian Manufacturers' Association. This association has 1,850 members. Through its organization and its aggressive championship of home industries it exercises an influence almost as the representatives of the entire body of manufacturers. At its annual convention held in Quebec in September of the present year the association accepted the report of the tariff committee. This report reaffirmed the resolutions adopted at the annual meeting in Halifax in 1902. These resolutions were for a revision which would more effectually transfer to the workshops of the Dominion the manufacture of many goods now imported from other countries, and which, while primarily framed for Canadian interests, should nevertheless give a substantial preference to the mother country, recognizing always that under any conditions the minimum tariff must afford adequate protection to all Canadian consumers. The bounty system as a substitute for the policy of protection was disapproved and reciprocity with the United States was opposed.

At the Quebec convention the following further declarations were made:

"If the Canadian tariff is revised from a national standpoint primarily for Canadian interests, and with a view to diverting surplus trade to British sources, we believe that it will successfully meet the requirements of the country and prove of inestimable advantage to all our producing classes alike."

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FISCAL IMPERIALISM AN IMPOSSIBLE POLICY.

Related to the proposed maximum and minimum tariff schedules and the British preference is the agitation for what is known as fiscal imperialism. This is the policy under which the United Kingdom would discriminate against the products of foreign countries in order that trade between the mother country and the colonies might be promoted. The modification of this policy which has been proposed in England, and which is to employ the discriminating duties only long enough to secure concessions for British goods in those countries that enforce high duties against them, is usually ignored in the Dominion discussion.

While there have been many sentimental declarations in favor of fiscal imperialism by Canadians they have been made with the knowledge that the English people at home have given no pronouncement in support of a duty on foodstuffs, which lies at the basis of the scheme. Though gratifying to the national sentiment these declarations have little practical force.

In essence the policy of fiscal imperialism as applied to Canada, in the view of the controlling body of public opinion, is an impossible one. It would mean that the United Kingdom should take the foodstuffs of the Dominion in return for the privilege of supplying the Canadian people with manufactured products. This further would require that the Northwest always should continue as a granary for the empire without effort to establish for itself even the limited industries which are possible in an agricultural region. It also would mean that Canada should dismantle many of the factories that have been established. The indorsements given the policy usually are qualified with the proviso that Canada shall buy its "surplus requirements" from Great Britain.

WORKING OF THE PREFERENTIAL TARIFF.

While therefore the United States has no reason to look forward to fiscal legislation by Canada that will give the United Kingdom a monopoly of the Dominion's market for manufactured products, it may be expected that further exertions will be made to discriminate in favor of British products that do not come into direct competition with Canadian products. The delicate task to be attempted in the coming revision of the tariff will be so to regulate the schedules that both Canadian manufacturer and the British manufacturer shall be benefited at the expense of the mills and factories of the United States. It is held by some Canadian statesmen that on lines of goods which are now imported pretty equally from the United States and Great Britain a high duty, or the maximum tariff, applied to the United States products and a low duty on British articles would throw the entire import trade to English manufacturers while not imposing additional taxation upon the Canadian consumer nor depriving the revenue of the necessary import duties.

The possibility of such an outcome may be judged partially, at least, from a knowledge of the workings of the present preferential tariff, which was retaliatory in intent. This preference began August 1, 1898. Its chief provision was that all imports from Great Britain should come into Canada on paying a customs duty of 25 per cent less than that levied on goods from foreign countries. The following

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parts of the British Empire, in addition to the United Kingdom, from time to time were included in the preference: Bermuda, British West Indies, British Guiana, British India, Ceylon, Straits Settlements, New Zealand, and South Africa. Beginning with July 1, 1900, the preference was increased from 25 to 33⅓ per cent.

The workings of this plan may be summed up in the statement that it checked the decline in exports from the United Kingdom to Canada, measured in percentages of the total, but did not adversely influence imports from the United States. The percentage of goods from the United States, both dutiable and free, increased. The exact status as between the United Kingdom and the United States is shown from the fiscal year 1900–1901, when the 33⅓ per cent preference was put into effect, by the following table:[a]

Year.	Great Britain.		United States.	
	Dutiable to total dutiable.	Total imports Great Britain to total imports.	Dutiable to total dutiable.	Total imports United States to total imports.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
1901	29.92	24.10	50.58	60.30
1902	29.54	24.95	50.72	58.40
1903	30.85	26.15	50.10	57.29
1904	30.18	25.34	52.07	58.71
1905	29.87	23.98	52.21	60.58

From this comparison it appears that in the period from 1901 to 1905, inclusive, the percentage of dutiable imports from Great Britain decreased from 29.92 to 29.87, while that from the United States increased from 50.58 to 52.31. It is also worthy of comment that in checking the very marked decline in imports from Great Britain the British exporter has had the benefit since 1903 of a greatly lessened competition from Germany through what is known as the surtax. The German Government applied the least favorable of its customs schedules to goods from Canada and the Dominion government retaliated by applying a surtax, under the terms of which one-third of the customs duties imposed by Canada upon any article imported from Germany were added to the duties imposed by the general tariff act. Under this arrangement the imports from Germany dropped, in round numbers, from $12,000,000 in 1902–3 to $6,000,000 in 1904–5, and the chief gainer was the United Kingdom.

COMPETITIVE GOODS ANALYZED—GEOGRAPHICAL ADVANTAGE.

With reference to the Canadian market for British goods, which is also the market for the United States goods, the following list of requirements appears in a compilation by the curator of the Canadian section of the imperial institute:

Linen.	Haircloth.
Woolen goods.	Jute goods.
Worsteds.	Boots and shoes.
Serges.	Leather trunks.
Hosiery.	Leather bags.
Yarns.	Wines.

[a] Monthly Report of Trade and Commerce, Ottawa, June, 1905.

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Essences.
Cordials.
Sauces.
Teas.
Coffees.
Blacking.
Grocers' sundries.
Sausage casings.
Biscuits.
Cakes.
Machinery.
Engineering tools.
Edged tools.
Railway supplies.
Engines.
Weighing machinery.
Shovels.
Contractors' tools.
Electrical batteries.
Electrical specialties.
Ventilating apparatus.
Fishhooks.
Pins.
Time registers.
Fire bricks.
Bottles.
Wire rope.
Builders' supplies.
Paints and colors.
Oils.
Wall papers.
Sporting goods.

An analysis of the customs importations shows that since the preferential tariff went into effect Great Britain has had the advantage of the United States as to increase in the following articles:

Manufactures of wool.
Linen.
Leather.
Carpets.
Cordage.
Confectionery.
Earthenware.
Cotton.
Flax.
Glass.
Curtains.
Jeans.
Gunpowder.

In the following manufactured products the preference has not advantaged Great Britain:

Silks.
Mitts.
Brass and copper goods.
Optical, mathematical, photographic, and musical instruments.
Varnishes.
Gloves.
Perfumery.
Electrical apparatus.
Clocks.
Paints.
Colors.

MINING MACHINERY.

Attention already has been directed to the fact that practically all the installation of the new Canadian industries, iron and steel plants, smelters, lumber and flour mills, is done by the United States. No preferential tariff can be devised which can deprive the United States of its market for mining machinery. A probability is that if the Canadian mills are unable to fill their orders for steel rails at any given time the preferential tariff will aid in the import of British rails. The surtax injured the Canadian market for German steel rails. Outside of this class it is doubtful whether the United States has anything to fear from British competition in iron and steel except in crucible steel, edged tools, etc. The competition between Sheffield and Pittsburg in these articles always will be keen. It is to be noted, however, that in saw teeth the Canadian mills insist on having the articles from the United States, and also saws. Philadelphia and St. Louis saws have not been displaced either by Great Britain or by the Canadian manufacturers.

With reference to the preferential tariff as a means of saving Great Britain's Canadian trade a further point may be understood. The growing markets of the future are in the Northwest. Geographically these are the most inaccessible of all commercial fields for the British manufacturer, whether he seeks to ship by the Atlantic and then three-

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quarters of the distance across the continent, or whether he figures that the loss of time and interest by the water route to British Columbia may be compensated in cheaper freights. In the latter case there is still a thousand miles of transportation from the Pacific coast to the heart of the new Northwest. The Mississippi Valley has such marked advantages over Great Britain in reaching the new wheat regions that if it loses any portion of this growing market on account of the preferential tariff the fault will be due to its own lack of aggressiveness and its unwillingness to meet the local trade conditions.

CANADA IN AUSTRALIA AND THE ORIENT.

Internationally considered, the balance of trade is against the Dominion. In 1904 the excess of imports over exports was $45,000,000, and in 1905 it was $61,000,000. An increased home demand is one explanation for the falling off as is also the shortage in the amount of the wheat crop in 1904 available for export in 1904. The decrease was in agricultural products, for the export of manufactured products was $1,250,000 greater in 1904 than in the previous year.

Canada maintains commercial agents in various countries, chiefly in other parts of the Empire, for the purpose of stimulating foreign trade.

The Colonial preference has been explained. Within the last year increased steamship facilities have been provided for Mexico and the West Indies. These have increased the imports in a greater volume than the exports.

The chief market for Canada's surplus manufactures is assumed to be in Australia and the Orient. It is in these sections that some competition may be felt by the United States. The exports to Australia have increased chiefly in agricultural implements, and a proportion of these are from the branch factories that were established by American concerns. The Australian statistics show a much smaller volume of Canadian goods entered for consumption than do the Canadian returns. This is explained by the circumstance that part of the Canadian exports are shipped via New York. The imperialistic fraternal sentiment between Australia and Canada is not pronounced, and there appears little ground to expect that the former will extend preferential treatment to the Dominion at the expense of the United States. The Australian market is one that both countries seek, and should a preference be granted it would have the effect of increasing Canada's trade and diminishing that of the United States. At intervals there is agitation for direct steamship service between Halifax and Melbourne and Sydney.

With a few exceptions, the idea that the American concerns which established branch factories in the Dominion would add materially to their export trade by shipping articles "made in Canada" to other British colonies has not been justified by results. The feeling has a local force only. One drawback to its realization is that the same sentiment may be assumed to apply to the United Kingdom, and those who want an article made under the British flag have no reason for rejecting that which is manufactured in England in order to purchase from one of the colonies.

EFFECT OF THE BOYCOTT.

In its export trade Canada seeks openings in the Orient. An unfounded assumption was that the boycott in China against American

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goods would result in increased Canadian sales. This has not proven to be the case. One reason is that the Chinese did not discriminate between the United States and other sections of North America. Had they done so, they would have found little cause to favor Canadian goods, since British Columbia, which is the entry place for Chinese immigrants into the Dominion, levies a tax of $500 per head. This tax is meant to operate as an ironclad exclusion law.

The idea is entertained that in time the Dominion may build up an appreciable trade in the Orient. It is assumed that whenever the Grand Trunk Pacific completes its line to the coast this result will follow, though the Canadian Pacific already has a line of steamers between Vancouver and Asiatic ports. A flour trade in competition with the United States is possible. Mills in Alberta, at Calgary, are now building with the hope of shipping flour to Japan instead of sending all the grain eastward in the form of wheat. In time flour mills are also likely to be established at Vancouver.

Whether Canadian goods other than food stuffs ever will find a large market in Japan and China is problematical. The Dominion hardly will be able to compete with machinery shipped from the United Kingdom. It is probable that Canada will come within the provisions of the general trade treaty between the British Empire and Japan, application for these concessions having been made. Under this treaty the Japanese tariff against Canada will be reduced on hides, leather, leather goods, condensed milk, sugar, live stock, cotton and woolen goods, paper, enamel ware, rubber goods, and hats and caps.

CHARLES M. PEPPER,
Special Agent.

TARIFF INQUIRY.

PROBABLE POSTPONEMENT OF LEGISLATION.

From newspaper clippings furnished by Consuls Chilton, of Toronto, and Gorman, of Montreal, it appears that the Canadian tariff commission will not be prepared to submit a report to Parliament at the time expected, and it is not improbable that the matter will go over until late in the coming year. Mr. Fielding, minister of finance, in reply to questions on this point, was noncommittal, but left the impression that postponement was not at all improbable. The Montreal Herald, which is regarded as a government organ, in its issue for November 2 published the following special dispatch from Ottawa:

It is possible there may be no tariff changes announced in the next budget speech. While the matter has not been considered by the tariff commission or by the government, it is understood that a number of the Liberal members of the House think the tariff could well go over until the November session.

This would enable Parliament to pass estimates and dispose of immediate business at a short session begun in January and it would give the government the entire summer to go into the various complicated questions involved in the making of a tariff. The only opposition to this course is likely to come from a section of the manufacturers, who feel that their products should be immediately dealt with by the tariff

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makers. The greater portion of the country would not object to the November session.

If this course is not followed the winter session is likely to be both late and long. It will take the commission from now until the holidays to complete their inquiry in Ontario, Quebec, the Maritime Provinces and Manitoba.

After that the government would have to go over the evidence and prepare the schedules. That is a two months' task, so the tariff could not be brought down until early in March. The debate which would follow would likely continue until almost the time it is planned to have Parliament called for the autumn session.

LIFE INSURANCE.

In view of the recent reform movement in insurance circles the following facts about life insurance in Canada will not fail to interest readers on this side of the line. They were sent by Consul Chilton, of Toronto, and were taken from the Toronto Globe. They are based upon a belief in Canada, as well as elsewhere, that policy holders are paying too much and are selected with a view to settling that question in the policy holder's mind. Fifteen millions a year is the sum contributed by Canadians to its insurance companies in the form of premiums upon policies. A third of this was swallowed up last year in general expenses. This is enough to satisfy anyone, says the Globe, that retrenchment is needed; also a more careful supervision of expenditures, and above all a reduction of the excessive amounts now allowed to agents.

These remarks apply to practically all the companies. Readers, it says, can, by doing a few sums in proportion, speedily discover the chief sinners.

HOLD ON TO POLICIES.

Thousands of foolish people in the United States, it continues, dropped their life policies when the revelations of excessive cost of management and of graft were made known. Now the American papers are pointing out at a late day that the great United States companies are solvent, etc. The Canada Life, may be overstaffed. If so, the same is true of companies throughout the country. Its expenses last year were 18.3 per cent of the total general expenses of Canadian companies, while it collected 19.4 per cent of the total premium income, had slightly over 21 per cent of the gross amount of insurance in force among Canadian companies, and paid out 28.8 per cent of the money returned to policy holders or their heirs.

GENERALIZATIONS.

The years' total payments to policy holders of all the Canadian companies was $6,054,703; the general expenses, $5,018,758; the dividends to stockholders, $217,719; total expenditures, $11,291,179; the excess of income over expenditures, $8,417,794; the net premium income, including consideration for annuities, $15,640,665; total income, $19,707,733; new policies issued, $63,510,690; gross amount in force December 31, 1904, $369,875,373.

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FIGURES FROM THE LAST CENSUS.

The third volume of the census of 1901, which deals with the manufactures of the Dominion, issued in October, covers 14,650 establishments in the Dominion, representing 269 classes of industries. The value of capital employed is given as $446,916,487, of which $209,378,638 represents lands, buildings, and plant, and $237,537,849 working capital. In the census year 344,035 persons were employed, their salaries and wages amounting to $113,249,350. The cost of materials used in manufacturing was $266,527,858, and miscellaneous expenses $24,688,838, making a total of $404,466,045. The total value of products was $481,053,375, as compared with 1891. For works employing five hands and over the census of 1901 shows a gain of 585 factories, 72,002 employees, $34,015,039 in earnings, and $112,356,652 in value of products. The comparative figures of a few of the principal cities are as follows:

Location.	Establishments.	Capital.	Employees.	Salaries and wages.	Value of products
Toronto	847	$52,114,042	42,515	$15,505,466	$58,415,498
Montreal	922	57,148,661	44,633	15,810,356	71,099,750
Hamilton	232	13,494,953	10,196	4,064,592	17,122,346
Ottawa	608	10,358,711	6,886	2,414,822	7,638,688
London	120	6,824,574	5,675	2,249,186	8,122,185
Winnipeg	103	4,673,214	3,155	1,810,845	8,616,248
St. John	187	5,252,797	4,688	1,644,051	6,712,769
Halifax	104	6,637,888	3,203	1,238,385	6,927,552
Quebec	255	9,588,739	9,384	3,103,518	12,799,546
Fredericton	14	618,264	9,384	185,100	691,043
Moncton	21	1,503,665	1,450	511,519	1,291,036
Sydney	21	12,092,604	637	204,211	631,396

THE SAN JOSE SCALE.

Consul Chilton, of Toronto, reports the presence of the San Jose scale in Canada in spite of every effort to eradicate it. He writes:

The Toronto Globe of recent date states that the San Jose scale, which first made its appearance in Toronto seven years ago, continues its ravages in the Niagara and Leamington fruit districts in spite of the efforts of the Ontario agricultural department and the growers. Only by the most persistent spraying and other efforts are the growers in those districts able to hold their own.

This, continues the article, is the statement made by Secretary P. W. Hodgetts, who has returned from a tour of the two districts, being accompanied through the Niagara district by Professor Lochhead of the Ontario Agricultural College. The article concludes as follows:

"Extensive spraying experiments have been carried on there, particularly in that section from St. Catharines east to the Niagara River, where the scale was at its worst this spring. It seems to have spread more this year in the vicinity of Queenston, where three years ago the inspectors reported that the orchards were practically free of it. In the vicinity of Leamington, in Essex County, and in the town itself, where two years ago there was no sign of it, the scale is bad and the growers are now asking for spraying demonstrations. While there has not been much to encourage the scale fighters in these two

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districts, it is gratifying to the department to know that the pest has been practically kept out of other parts of the Dominion. The result of this season's experiments have convinced Secretary Hodgetts and the other officials concerned that the lime-sulphur spraying mixture properly boiled and thoroughly applied gives the best results."

DECLINE IN EXPORTS.

Consul Chilton, of Toronto, reports a falling off of over $3,500,000 in Canadian exports for the first three months of the fiscal year, and cites the Toronto Globe, as follows, to show the exports of domestic products for those months and the same period in 1904:

Description.	1904.	1905.
Mines	$9,394,119	$7,396,750
Fisheries	2,900,596	3,100,871
Forests	11,088,068	11,176,690
Animals and their products	20,658,122	20,984,300
Agriculture	7,231,691	4,827,623
Manufactures	4,878,914	5,120,621
Miscellaneous	13,596	18,734
Total	56,165,106	52,625,589

The Globe claims that the slow movement of the western grain crop is probably responsible for this decrease in exports, and adds that "the decline in exports is mainly under the head of agriculture, which would include grain sent forward for shipment from the country. Exports of animals and their products, which in the previous statement had gone behind, now exhibit substantial improvement, the betterment amounting to $326,178. Manufactures also show a well-maintained and satisfactory increase, the gain for the past quarter being $241,707. These figures, of course, refer to exports of domestic products. The total imports were $67,992,845, as compared with $65,585,665 for the same quarter of the year previous."

GRAIN MOVEMENT.

COMPLICATED AND EMBARRASSING CONDITIONS.

In the following report Consul-General Holloway, of Halifax, points out the difficulties that confront the grain growers and dealers in Canada because of inadequate transportation facilities. He hints at hindrances in the form of almost if not quite arbitrary rulings on the part of transportation companies to take grain or refuse to ship as best suits their own ends. He writes:

The Canadian vessel owners on the Great Lakes have complained to the Canadian railway commission that the Georgian Bay railway terminals are inadequate and that there is a great shortage of cars to move eastbound grain as a discrimination in favor of American grain. All the elevators are full and the railway facilities insufficient to keep the grain moving. The Canadian Pacific at Owen Sound and the Grand Trunk at Midland, Collingwood, and Meaford virtually refuse, except at their own discretion, to receive from lake vessels the export grain brought down from Fort William unless it is to be forwarded from the

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Georgian Bay elevators after the close of navigation at Montreal. This leaves Depot Harbor the only outlet on Georgian Bay for the grain crop of the Northwest.

The Grand Trunk, which now owns the Canada Atlantic line to Depot Harbor, is only providing cars enough to handle 100,000 bushels a day, while the large Canadian craft on the upper lakes can of themselves deliver 200,000 bushels if there were cars enough to move it. In spite of the Grand Trunk's inability to handle the Canadian grain, delivered by the Canadian vessels, it provides rolling stock for the carriage from Depot Harbor of the American wheat from Chicago landed by the *George Orr*, the *Arthur Orr*, and the *Kearsarge*, amounting to 300,000 bushels weekly. These vessels are now controlled by the Grand Trunk. The acceptance of their cargoes reduces the facilities furnished to Canadian shippers to fifty or sixty cars per day, which is only sufficient to carry what two of the Canadian steamers deliver weekly. If the present conditions continue the balance of the Canadian shipping must either tie up, or go into other business, or wait the railway's pleasure to be unloaded.

BANKS.

LARGE INCREASE IN DEPOSITS.

Consul-General Holloway, of Halifax, reports a remarkably healthy condition of Canada's banks and financial institutions. He says:

While the commercial and agricultural interests of Canada are rapidly increasing, and consequently their financial requirements are greater than formerly, it is equally true the financial resources to meet these demands are keeping abreast and ahead of requirements. A glance at the accompanying table will show the enormous increase of deposits in the past five years:

Description.	1900.	1905.	Increase.
Post-office savings bank deposits	$37,507,456	$45,367,027	$7,856,571
Government savings bank deposits	15,642,267	15,558,387	916,120
Chartered bank deposits	279,241,477	583,954,566	236,713,089
Savings banks	17,425,470	25,645,660	8,180,190
Loan company deposits	18,924,000	20,150,000	1,226,000
Total deposits	386,740,670	641,675,620	254,934,970

Other evidences of the remarkable extension of Canadian resources are presented by the following:

Description.	1900.	1905.	Increase.
Dominion notes in circulation	$26,550,465	$49,456,560	$22,906,095
Chartered bank notes in circulation	47,421,000	62,497,400	15,076,400
Bank capital paid up	65,368,000	83,017,000	17,649,000
Bank reserve	33,245,018	54,020,408	23,775,400
Discounts	286,897,000	463,186,200	176,289,200

A very small percentage of Canadian stocks are now carried on margin, thereby reducing to a large extent the demand formerly existing for this purpose. This, with the enormous increase indicated above, places the possibility of a stringency in the money market in

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Canada at the present time out of the question. It is definitely settled that the Bank of New Brunswick will not be merged into the Bank of Montreal. On the contrary, it is probable that the local bank will start out on a large career by increasing its capital from half a million to one and a half millions or two millions.

PROFIT SHARING.

REMARKABLE SUCCESS OF A SCHEME TO SATISFY LABOR.

Consul Smith, of Victoria, British Columbia, reports a successful profit-sharing scheme. An electric company began by giving its employees $25 as a bonus in 1903, $35 in 1904, and $40 to each of 425 workmen in 1905. The plan is outlined in sufficient detail to give a good idea of its operation. The report follows:

A noteworthy instance of a large corporation sharing its profits with employees—one believed not to be paralleled on this continent—is that of a British corporation, capitalized at $1,000,000, having its headquarters and general officers in London and operating the electric street-car service in the cities of Victoria, Vancouver, and New Westminster. In Victoria and Vancouver the company owns and controls the entire lighting, gas and electric. Three years ago the management resolved to establish a profit-sharing system with its employees. Just before Christmas in 1903, the first bonus of $25 per capita was given to each employee of the company who had been in the service over a year. Last year the earning power of the company materially increased, as also did the amount of the dividend to the men. They each received $35 as their premium in 1904. This year the premium has shown a further increase, being $40 for each of the 425 men employed.

PLAN FOR DISTRIBUTION.

The plan of the company in determining this bonus to the men is as follows: First, a dividend of 4 per cent is declared on the capital stock of the company after the net earnings are computed. Then the balance of the year's profit is divided into three equal parts as follows: Two-thirds to the stockholders and one-third to the employees. For 1905 the net earnings were such, notwithstanding the purchase during the year of the Victoria gas works, that after declaring an additional 2 per cent to the stockholders, making 6 per cent in all, the sum of $17,000 still remained, which is this week divided among the 425 men employed by the company.

A peculiarity of this bonus is that the same amount is given to every employee. Thus the track greasers, clerks, and messengers each receive $40 extra, and the managers at Victoria, Vancouver, and New Westminster each receive exactly the same, while the general manager at London also was awarded $40 bonus and no more.

PROVES SATISFACTORY.

It is hardly necessary to add that this system and the steady increase of bonus year by year gives great satisfaction to the employees. The relations between capital and labor are all that could

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be desired. It is said that the only other large corporation in the world that has a similar profit-sharing system in force on such a large scale is the South Metropolitan Gas Company, of London, which allows the same percentage, but the bonus is divided among a much smaller number of employees. The company feel that in the increased interest and close attention given by employees to the service of the company, entire freedom from strikes and other troubles, they are fully warranted in giving this bonus. The action meets the entire approval of the stockholders.

TIN-PLATE CONSUMPTION.

RELATIVE IMPORTS FROM GREAT BRITAIN AND THE UNITED STATES.

Consul Culver, of London, Ontario, furnishes the following, taken from the London Iron and Coal Trades Review:

Through the Canadian Manufacturer of November 3, I take the following from the London Iron and Coal Trades Review, pertaining to British and American tin plates in Canada:

"The British tin-plate trade, apart from the loss of so much of the American demand as has been effected by a prohibitory tariff, remains practically as invulnerable as ever. The total tin-plate exports of Great Britain are still close on 400,000 tons a year. The total export of all the other countries of the world, the United States included, is less than 20,000 tons. One phase of the tin-plate trade that is difficult to be understood is that of the imports into Canada. The Canadian market for British tin plates has not been improved much of late years, although in view of the enormous extent of the tinned salmon trade and other branches of food and fruit supply we should expect it to increase materially. The total British exports of tin plate to Canada in 1904 were more than 6,000 tons under the exports of the previous year. This does not entirely correspond with the increased exports of tin plates by the United States in the same year, but there was a material advance of such exports in that year, and it is an easy thing to correlate the two facts. Indeed, the American trade returns show that Canada did take a considerably larger quantity of American tin plates in 1904 than in the previous year. This would be a simple problem enough if the prices quoted in the two cases were approximately the same, but the official records of value show that the American prices, in 1904 at all events, were materially higher than the British. We are therefore driven to the conclusion that the American plates were taken because of the convenience of the source of supply and by means of the peculiar contracts made by American firms."

The total value of all tin plates and sheets imported into Canada in the fiscal year 1904 was $1,461,811, against $1,751,507 in 1905, an increase of $289,696. Our imports from Great Britain in 1904 were valued at $1,215,700, against $1,206,906 in 1905, a decrease of $8,794. Our imports from the United States were $246,111 in 1904 and $544,601 in 1905, an increase of $298,490, or considerably more than 100 per cent.

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FRACTIONAL SILVER.

EFFORTS TO BANISH AMERICAN COINS.

Consul Ifft, of Chatham, reports that the efforts being made in Canada to prevent the circulation in Canada of United States fractional silver coins are not meeting with the success expected from the action of Parliament. The consul writes:

There is considerable agitation in the Canadian press for the adoption of some effective arrangement for the carrying out of the scheme formulated at the last session of the Dominion Parliament for ridding Canada of the United States silver coin which now, especially in the border cities, circulates as freely as does the Canadian coin. The plan of the government was to have the banks collect the coin, send it to the United States, and to pay the banks a commission of three-eighths of 1 per cent for their services, but to the present time no steps have been taken to banish the silver coins bearing the eagle. The silver coinage of Canada has an admixture of at least 25 per cent of American coin, perhaps more. Discussing the subject with a local merchant, in answer to a request for his opinion as to its extent, he drew from his pocket silver amounting to $2. One dollar and five cents of this sum was in United States coinage. A banker states that at his bank the average daily takings of United States silver amount to $55. The London, Ontario, Free Press asks:

"Why is this one-sided circulation of foreign currency allowed to continue to the exclusion of our own money? Every dollar that passes in trade displaces the same amount of Canadian currency. * * * Not only are our bank bills refused at American commercial centers, but our government bills and the silver coinage also. There is no sign of a desire for reciprocity among our neighbors in this particular, however anxious some of them are to get our raw material for manufacture. At the same time Canadians receive every kind of American currency. United States silver certificates are current at our stores on the gold basis, and their silver diffuses itself in our coinage in the ratio of from 25 to 40 per cent."

PUBLIC HEATING PLANT INSTALLED.

The city of Chatham has the distinction of being the first city in Canada to install a public heating plant. The corporation which has constructed and is operating the plant is known as the Chatham Steam Heating Company, and may be called an offshoot of the Chatham, Wallaceburg and Lake Erie Railroad Company. The exhaust steam from the railroad company's power house is used by the heating company. About a mile of mains has been laid, and several churches, schools, hotels, office buildings, as well as business houses and private residences, are connected with the mains. The main pipe through which the steam passes is an iron one. It is wrapped in asbestos, and this again is inclosed in a tin tube. Outside the tin tube there is an air cushion, and outside of that again is a wooden covering, which is bound with wire, and the whole treated with creosote and other materials. In this way a durable and cold-proof tube is secured. At short inter-

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vals there are condensing valves, which make up in themselves the bulk of the cost of laying the pipes, which amounts to $8 per foot. The pipes are laid in a rather peculiar manner, the depth varying from 4 to 6 feet, in order to allow a sufficient slant for drainage, for a little water is sure to condense in the tubes. This runs off into the sewers.

The steam has just been turned into the mains, but whether the rates fixed will lower the heating expenses of the users has not yet been demonstrated. They will, however, be saved the trouble of paying men to look after their furnaces or of doing it themselves. It is expected, however, that there will also be a considerable reduction in insurance rates, because of the absence of fire in the buildings. The rates are made up in two ways. On the flat rate the charge is based on the number of cubic feet in the building to be heated, and varies from $3 to $5 per hundred feet, according as there are one or more sides exposed to the weather. On the meter system the charge is at the rate of 50 cents per thousand pounds of water condensation.

TOBACCO CROP.

Consul Martin, of Amherstberg, Ontario, reports an excellent tobacco crop in his district, one not equaled in quality and quantity since 1890. Mr. Gregory, a North Carolina tobacco expert of the Empire Tobacco Company, puts the possible yield for this year at 12,000,000 pounds. He says the kind grown here called the Burley is the same as the Kentucky Burley. Mr. Gregory says:

The cost of raising and marketing an acre of tobacco in North Carolina is $41.25; average yield is 800 pounds; price realized, 8 cents per pound, or $64 per acre. The cost of production of an acre in Essex County, Ontario, Canada, is computed by competent authorities to be $45; average yield is 1,125 pounds; price averaged for past seven years, 9 cents, or $101.25 per acre. Thus it appears that the profit from 1 acre in North Carolina is $22.75, and the same here is twice as much, or $46.25.

While, as stated, 1,125 pounds is the average yield per acre, 1,300 to 1,500 pounds is very common, and as high as 2,250 pounds have been taken from a single acre. It has become one of the staple crops in this district.

According to the Statistical Yearbook of Canada for the year ending June 30, 1904, there was imported into Canada for that year 14,248,303 pounds of leaf tobacco, valued at $2,438,203. of which 13,861,780 pounds was from the United States.

COAL FROM WALES.

MOVEMENT BY MANUFACTURERS.

Vice-Consul-General Gorman, of Montreal, reports that Canadian manufacturers have started a movement with a view of obtaining coal from Wales, and have had experiments made to ascertain its value, compared with the product of the United States. He writes:

Some months ago the Canadian Manufacturers' Association shipped to coal owners in Wales samples of six different grades of coal.

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These samples were of coal such as is used every day in the factories in Canada, and were imported from the United States. The English collieries requested the coal for testing purposes and to ascertain whether or not coal of similar properties could be delivered to points in Canada at prices to compete with the prices for which the United States coal was sold. The investigations are still being carried on and the feasibility of the project has not been decided. The analysis of the coal is given herewith:

Chemical constituent.	Stove.	Pea.	Hard screenings.	Soft screenings.	Maslin screenings.	Steam.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Fixed carbon	84.43	81.63	75.17	55.47	55.40	60.63
Volatile matter	3.77	5.22	5.13	31.88	33.55	31.87
Ash	7.80	9.10	15.50	10.50	4.20	6.10
Water	4.00	4.05	4.20	2.15	6.85	1.40
Total	100.00	100.00	100.00	100.00	100.00	100.00
Sulphur (separately estimated)	.67	.85	.95	4.06	1.21	2.40

POSTAL STATISTICS.

REVENUE EXCEEDS EXPENDITURES.

Consul Moorhead, of St. Thomas, Ontario, writes about the work of the Canadian post-office, giving figures for the fiscal year ended June 30, 1905. He says:

For the fiscal year ending June 30, 1905, the Canadian post-office shows a clear surplus of $490,844 over and above all expenditures. In 1896 there was a deficit of $781,152. The past year's transactions show an increase of 841 in the number of postal-note offices, 419 in the number of post-offices, 280 in the number of money-order offices, and 28 in the number of savings banks. The total increase in mileage of the mail carriage during the year was 1,736,817. The estimated number of letters posted was 285,541,000, as against 259,190,000 in 1904. The amount of money remitted by money orders was $36,229,050. The value of the stamp issue was $6,202,832, an increase of $566,085 over the year preceding. The service is not as good as that of the United States. Rural delivery has not been carried on to the extent that it has in the United States. In this city of over 14,000 inhabitants the mail is not delivered and there are no Sunday collections.

Consul Deal, of St. Johns, writes that, following the lead of the American Bankers' Association, the Canadian Bankers' Association are endeavoring to recover the money-order business of Canada, which is now almost entirely done by different express companies and the Dominion post-office department. This action will end the practice of banks charging 15 cents on a check whether it was for $3 or $50, and any amount under $5 will, according to the new rates agreed on, be put through for a charge of 3 cents; from $5 to $10 for a charge of 6 cents; from $10 to $20 for 10 cents; and from $20 to $50 for 15 cents.

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MEXICO.

AGRICULTURE, COMMERCE, AND MANUFACTURES.

WARNING TO INVESTORS—FRAUDULENT MINING SCHEMES—MATERIAL DEVELOPMENT OF THE REPUBLIC.

The following story of Mexico's industrial conditions is taken from Consul-General Parsons's annual report. The items selected will serve to answer questions about Mexico's rubber plants and prospects, its agricultural, manufacturing, and commercial undertakings:

The chapter on Mexican investments, which forms a part of this report, summarizes briefly, with some additions, information not made public, but given more exhaustively in former communications. With this introduction it would serve as an answer to quite a large proportion of the circa 2,500 miscellaneous letters received at this post annually. Considerable excitement was created in 1905 over the extraction of rubber from the guayule plant, and many companies were formed to exploit this new industry. The stories of huge fortunes to be made in this way resemble the early promises of enormous profits from the culture of Castilloa elastica. Estimates in the case of Castilloa elastica have now been reduced to more reasonable proportions, and a corresponding reduction may be necessary later in the case of guayule.

The zapupe fiber plant, similar in appearance to the henequen plant of Yucatan, has also recently attracted marked attention. It was used for centuries only by the Indians in the manufacture of lariats, bridles, cordage, etc., but attempts are now being made to grow it on a large scale, and it is believed by many that it will soon become a source of great wealth. Time alone will show.

Some interest was also taken during the year in the claims that Mexican tree cotton is immune from the boll weevil, and that the staple is equal in every respect to that produced by the cotton plant of our Southern States. Scientific investigations, however, seem to show that there is little foundation for these claims.

GROWING OF CEREALS AND CATTLE.

It is encouraging to note a growing belief in profits to be derived from cattle and increased attention to common crops like wheat, barley, corn, and rice. Near the cities there are excellent opportunities for competent farmers to make money by raising fruits and vegetables for the city markets. Attractive fruits at the capital usually come from California and command ridiculously high prices even in season. Native fruits are poor, as practically no attention is paid to budding and grafting. Mexican apples are now selling in the City of Mexico for 2 centavos apiece, while American apples bring 60 centavos a kilo. Mexican potatoes sell for 12 centavos a kilo, American potatoes for 17 centavos a kilo. Wheat now brings $17 silver per 161 kilos and corn from 10 to $12 per 200 liters, as compared with $7 in August last.

Corn is the chief food of the working classes. When corn is high the poor suffer, and the employer of labor finds a reaction on the

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industries of the nation. Various reasons are given for the present high prices of corn, such as the recent shortage in the wheat crop and the high price of flour, the enormous increase in the demand for corn for the purpose of manufacturing alcohol, and holding for still higher prices. As the crop to be cut in January, 1906, will probably be only an average crop, it has been proposed either that the Government impose a special tax on corn alcohol or that the import duty on corn be removed. It is believed, however, that the corn market will gradually right itself.

In Mexico the assistance of trained scientists is specially needed in all forms of agriculture, and this need will probably be supplied satisfactorily in the near future. In his September, 1905, message President Diaz states that arrangements are being completed for the establishment of three experimental stations. Among the special studies at the Mexican National Medical Institute particular attention is now given to new species of rubber plants and to chemical processes for extracting the product therefrom. American rubber planters also propose to establish soon a laboratory and rubber experimental stations in Mexico with a scientific staff to study questions connected with rubber culture. The practical importance of this step is evident. If it had been taken some years ago probably millions of American capital would have been saved.

COLONIZATION.

Doubtless there are large tracts of lands in Mexico very suitable for colonization purposes. The manager of the colony of Porto Ricans recently established in Tabasco writes me quite enthusiastically about conditions there and leaders of the new colony from Zion City tell me they expect to have soon in Mexico from five to ten thousand colonists. But as a rule the necessity of caution is even greater in colonization schemes than in mining and plantation enterprises. Many cases have come to my attention in the past year in which people have given up good positions at home and suffered hardships here, deceived by the lying promises of land companies or of their accredited agents.

There will always be, of course, a great difference of opinion even among honest men regarding the merits of most new mining, agricultural, or land schemes. Much depends on the point of view. But those who deliberately lie about conditions here should be punished, though the contract of doing so would seem large to one familiar with the advertising matter of many of these schemes.

BANKING AND MINING.

Banks in Mexico are very prosperous. In fact, the only bank failures recorded since the first Mexican bank charter was issued is that of a promoters' bank organized in the United States and several smaller private banking enterprises. October 14, 1905, the second anniversary of the closing of the International Bank and Trust Company of America, the promoters' bank referred to, was celebrated by a first payment to creditors of 20 per cent. It is stated that no national bank earns less than 10 per cent. Loans are made, not on stock or bond collateral, but on two or three signatures, and the per cent of losses is very small in the banks constituted under national laws. Interest rates to borrowers run from 8 per cent to 12 per cent.

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Up to January, 1905, there were in existence 19,471 legally registered mining titles in Mexico. The classification, distribution, and production of these mines will be given in a special report now in course of preparation. Mining taxes have been reduced to compensate miners for their loss in the curtailment of the free coinage of silver. Finance Minister Limantour estimates the loss to the treasury in mining taxes to be $3,600,000 Mexican currency a year, this reduction being based on an annual production of $105,000,000 Mexican currency of gold and silver.

PUBLIC INSTRUCTION.

Educationally the year was marked by the inauguration, July 1, 1905, of the new department of public instruction and fine arts and by the establishment in the City of Mexico of a thoroughly modern American school with a teaching force equal in preliminary education and professional training to that of the very best schools of the United States. This school, if maintained at its present high standard, will solve what has been a leading problem with the American colony in the City of Mexico—the proper education of the children.

WARNING TO INVESTORS.

Mexico offers a promising field for American capital and energy, especially now that a fixed value has been given to the currency of the country. With the great fluctuations in exchange which prevailed before the adoption of the measures for monetary reform, it was difficult to secure money for investments which under a fixed currency are deemed safe. But it is still necessary, in spite of the publicity occasioned by recent exposures of fraudulent American companies operating in Mexico, to warn the people of the United States against Mexican investments, especially in mining and agriculture, except as the result of careful investigation.

We know at home that since the Spaniards began, some four hundred years ago, to exploit the mineral deposits of Mexico, thousands of millions of dollars worth of precious metals have been mined; that, for example, nearly one-third of the silver now existing in the world came from the mines of Mexico, and that to-day many of these mines are heavy producers of this and of other precious metals. Profiting by these facts, as well as by the credulity of the public and by a degree of inaccessibility which increases the chances for immunity from investigation, unprincipled Americans have secured enormous sums of money from the people of the United States for worthless shares in their so-called Mexican mines. And Americans, quite frequently the comparatively poor, will continue to lose their money in this way unless they take the trouble to investigate before they buy.

AGRICULTURAL INVESTMENTS.

The same caution is necessary with regard to investments in agricultural enterprises. In such enterprises the element of chance does not figure to such an extent as in mining, where unpromising ventures sometimes yield large profits. We know that somewhere in Mexico, between its tropical coasts and its mountains capped with snow, almost every agricultural product can be grown to advantage either for home consumption or for the great markets of the United States. But common sense, common honesty, knowledge, and experience are as neces-

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sary to the success of agricultural enterprises in Mexico as they are elsewhere. With the exercise of these qualities the element of chance is reduced to a minimum and success is almost assured. After a study, however, of agricultural conditions in the Tierra Caliente I am convinced that these qualities are exercised even more seldom than is commonly supposed; that there is a very large amount of direct misrepresentation, if not absolute fraud, in connection with agricultural propositions there, and that common sense is almost as uncommon as common honesty; that, in fact, in some cases in which the administration seems honest, there is a lack of ability in management or in selection of soil, climatic, and other conditions which would seem to make ultimate failure inevitable.

Tropical agriculture in Mexico has been discredited to a great extent by planting under unsatisfactory conditions. There would seem to be no good reason, for example, why Mexico should not compete with any country in the world in the production of sugar, but the industry is now suffering because in so many cases little trouble has been taken to secure proper land with transportation facilities, either actual or possible at a reasonable outlay, and an honest and capable management.

SUCCESSFUL CULTIVATION OF RUBBER.

Again, the culture of rubber (*Castilloa elastica*) is already a commercial success to a limited but growing extent, as proved absolutely by my inspection of Mexican plantations owned by natives who are now cropping rubber from cultivated trees. Rubber culture, like sugar culture, is profitable provided soil, climatic and other conditions are favorable, and plantations are managed honestly and well. But rubber growing, too, is now suffering because these conditions have been disregarded, and it will suffer still more when it becomes known how many of the circa 50,000,000 cultivated rubber trees in Mexico can amount to little or nothing because they were planted under unsatisfactory conditions.

CAUTION AGAINST FRAUDULENT SCHEMES.

Americans should not invest in Mexican enterprises except as the result of a personal investigation, or of a report known to be reliable. They should not conclude, and this is very important, that because reputable banking companies in the United States act as trustees for Mexican enterprises, shares in such enterprises must have value. These trusteeships as a rule have little if any bearing either on the soundness of the proposition or the value of its stock. Shares in the Mexican enterprises for which American banking companies stand as trustees may be absolutely worthless.

Nor should Americans conclude that a Mexican investment is sound because men of reputation and wealth, both in Mexico and in the United States, seem to be interested in it. Promoters of the rankest frauds in Mexico usually seek to cloak their designs with some degree of respectability in this way. We had conspicuous illustrations of this quite recently in the case of American companies operating in Mexico against which our Post-Office Department issued fraud orders. The promoters of these companies gave repeatedly, in their printed matter, the names of many distinguished Americans as vouching for their business ability and integrity. By trading on these names they

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sold stock long after even those with a slight knowledge of the propositions knew they were fakes. Frequently, of course, the names of well-known men are used absolutely without authority to boom fraudulent propositions. But often such men take fliers, influenced by the wily statement of the promoter or by the weight of their names. With a thousand irons in the fire at home, these men really know nothing about Mexican enterprises, and can afford to lose such small investments with perfect equanimity. In fact, if men of this class alone were the losers it would not be worth while to write of this matter at all. Unfortunately, however, a large share of American subscriptions to these fraudulent Mexican enterprises comes from school teachers, common laborers, or others who can not afford to lose their money.

MISLEADING REPORTS.

Shareholders in an American enterprise operating in Mexico should not place much reliance, as a rule, on the reports of their fellow shareholders who have inspected the property supposedly for their benefit. I have read many of these reports after visiting the plantations to which they referred, and though there are some conspicuous exceptions they are often highly misleading and most inaccurate. Nor should prospective or actual investors in such enterprises make much of the fact that leading business men of their locality are interested in them. Frequently the promoters are the only ones that give these enterprises any attention, and while the benefits to them are evident, those to be derived by the shareholders exist only on paper

Mexico has a charm that seems to upset the judgment of Americans who invest without knowing much of the promoter and less of the investment. Frequently enormous sums have been paid to middlemen for concessions that could be secured directly from the Government by the expenditure for attorney's fees of from $100 to $1,000 gold. Scattered throughout the Republic are men who make large incomes by securing concessions for foreigners who do not know that a concession is given as a matter of course to reputable business men. A concession does not mean a gift from the Government, but a contract, whereby the Government grants certain licenses and exemptions in return for the investment of capital for the public good.

QUESTION OF MANAGEMENT.

In the organization of enterprises in Mexico more attention should be paid to the question of management. Boards of directors in New York, Chicago, St. Louis, or San Francisco can not know conditions in Mexico sufficiently well to direct in detail affairs in Mexico. This applies particularly to tropical agricultural enterprises. The accounts one hears from plantation managers as to orders from the north about planting, what to plant, when to plant, and so forth, would be laughable were it not for the fact that the money necessary to give effect to these ridiculous directions is too often furnished by those who can ill afford to lose it.

BAIT FOR INVESTORS.

Agricultural and other companies operating in Mexico sin heavily in paying unearned dividends for advertising purposes and as a bait

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to prospective investors. Many companies pay dividends out of capital with no regard to the fact that the capital stock of the corporation is a trust fund which the shareholders can not divide among themselves, leaving the creditors in the lurch. Other companies contract with their development companies to declare gross profits as dividends, and then seek to convey in their advertising matter the impression that such dividends were earned. Of course, as Cook says in his work on Corporations, there are no profits but net profits. To say that an amount of gross earnings, which includes expenses, that which has been or must be paid out, is profits, is to commit the absurdity of saying that loss is profit. In Thompson on Corporations (sec. 4288) is the statement that there is "no form of statutory liability more commonly imposed upon directors of corporations in all States of the Union than that which makes them personally liable for declaring dividends when there is none to divide." Certainly there is no other provision so frequently disregarded by American companies operating here.

THE FARM AND MINE.

LACK OF WATER AND ABOLITION OF FREE ZONE.

Consul Edwards, writing from Juarez, favors a movement that will unite Mexican merchants more closely with manufacturers and merchants in the United States. He thinks there is a vast field beyond the Rio Grande that can be successfully covered by the agents of American concerns. The report follows:

In the city of Juarez, the largest in this consular district and on the Mexican border, in the valley of the Rio Grande, a general depression in business and a decrease in the agricultural pursuits is generally admitted. Two good reasons are given for that condition: First, the growing uncertainty of a supply of water for irrigation, owing to the increased consumption of the waters of the Rio Grande by the farmers on the American side, in the Territory of New Mexico, causing the Mexican farmer to almost entirely abandon farming in that valley; second, the abolition of what is known as the Free Zone territory. The latter was a severe blow to the city of Juarez, as a large portion of its population are working people and are employed at El Paso (on the American side). Under the Free Zone law they were enabled to live cheaper on the Mexican side. With the possible exception, however, of this narrow strip the Republic of Mexico is without a doubt abounding in a prosperity and progress second only to that in the United States.

THE MINING INDUSTRY.

The greatest increase and general advance seems to be in the mining industry. Transactions in mineral properties, involving fabulous sums, are almost daily occurences in this district, and transfers made to Americans are largely in the majority. The importation of mining and milling machinery from the United States through this port will, at the close of the year 1905, far exceed any previous year. President Diaz in his annual message to Congress a few weeks ago says that in the half year between January 1 and September 30 of the present year

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there were issued 1,608 title deeds, conveying new mining locations of an area of 26,133 hectares, the total number of mining locations during the fiscal year being 2,840. While close observation shows that manufacturers in the United States are getting a liberal percentage of this trade, the demand is becoming so great that it is not difficult for agents of foreign manufacturers to get orders. Special attention of manufacturers who turn out appliances for concentrating ores should be called to the fact that the great distances and remoteness from market of very many of the rich ores will necessarily create a demand for these plants, hence the possibility of sales of concentrating plants.

REQUIREMENTS OF AGRICULTURE.

The territory covered by the activity in mining mentioned above is tributary to that portion of the country settled by the Mormon colonies, whose people are making a great success of agriculture and horticulture. There are nine of these colonies located within a radius of 100 miles, and a total population of about 4,000. These people are utilizing the waters of the Casus Grandes River and its tributaries for irrigation purposes. Their beautiful towns and fertile valleys are like gardens on the desert; they furnish rest and recreation to the men engaged in prospecting and mining. These colonies are made up of English-speaking people of refinement, moral and temperate in their habits. Many, if not a majority, of them are American citizens. To these may be also credited a large portion of the commercial and industrial progress of northern Mexico and the credit for opening up the channels of trade and many lucrative investments for Americans. The increasing demand for all kinds of agricultural machinery and implements should not be overlooked by our manufacturers. One may mention in particular farm and freight wagons, and generally those of a lighter grade than are used in the United States, for the horses and mules here are usually small. Besides, the duty charged on all farm machinery is by weight. The era of vehicles is just beginning in Mexico.

I would suggest to manufacturers of machinery and implements for farming and mining the cooperative plan of establishing agencies to handle their goods in the Republic. One house in each of the principal cities and towns carrying samples and a temporary supply could, with the liberal use of catalogues, build up trade and establish a permanent demand for these necessities. By such a plan a saving in expenses would be possible. Such cooperation, even limited to the employment of an experienced man to classify for shipment and adjust tariff matters, would in itself prove beneficial.

RAILROADS.

The greatest need and desire of Mexico is more railroads. The Mexican Central opens a flood gate for the importation of American merchandise to the extent of many millions a year through its northern end at El Paso, Tex.; but the Mexican Central has two ends. While its northern end draws a constant stream of American products into the Republic, the other end reaches to the Gulf of Mexico and for return freight invites, in competition with the United States, commodities from every country in the world. Hence the wares of Eng-

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land, France, and Germany may daily be seen on the same platform with those from the United States and often in larger quantities. In conjunction with these facts it may be stated that there is room for at least a half dozen more Mexican Central railways to leave American territory and enter the heart of Mexico.

The second railroad beginning in El Paso and entering Mexican territory is the Rio Grande, Sierra Madre and Pacific. This road is now operated for 160 miles into the interior; it parallels the Mexican Central and bears to the west, until at the present terminus the two roads are about 90 miles apart. This road is projected south along the line dividing the States of Chihuahua and Sonora. It penetrates a country rich in minerals and valuable timber, the objective terminus being a point on the Gulf of California. There is a rumor going the rounds of the newspapers that the Rock Island company contemplates the purchase of this road with the view of extending its system into Mexico, a proposition which is considered with favor by the people on both sides of the line.

TARIFF.

It is the opinion of many Americans doing business in and with Mexico that the time has come when a reciprocity treaty involving a reduction of the duties on a few articles of commerce should be entered into between the two nations. It seems that a list of articles could be selected from the tariff schedule of both countries which, if placed on the free list for a term of five or ten years, would result equally beneficial to the two Governments. Such a treaty would, in addition to increasing the volume of trade, stimulate the building of new railroads and create closer commercial relations between the people of the two countries.

PROSPERITY OF THE REPUBLIC.

SUMMARY OF ITS ANNUAL ACHIEVEMENTS.

President Diaz, in transmitting his semiannual message to the Mexican Congress last September, discussed many subjects of interest to the Republic, as the following excerpts, furnished by Consul-General Parsons, show:

The revenue for the fiscal year ended June 30, 1905, exceeded $90,000,000 silver, a gain over 1904 of at least $3,000,000 silver, while expenditures fell so far short of the revenue that the surplus will compare favorably with that secured heretofore.

The Government is giving serious attention to the problem of irrigation on a large scale throughout the Republic, and water courses under Federal jurisdiction are being utilized on a constantly increasing scale for the promotion of agriculture and manufacturing. In 1904–5 concessions were granted for the diversion of 12,224 liters of water per second from the Ameca, Fuerte, San Lorenzo, and Castillo de Vaca rivers for irrigation purposes. Concessions were also granted for the use of 52,150 liters per second to generate power on the Angulo, Lerma, San Geronimo, Atoyac, Nexapa, Conchos, and Baluarte rivers.

During the fiscal year the Government issued 1,218 deeds to public lands, covering 999,327 hectares and yielding $523,654. Much of this

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land was free by way of subsidies to railways, reimbursements for surveying expenses, concessions to small farmers, and provision for village commons.

The new mining deeds granted in 1904–5 numbered 2,840, covering an area of 45,826 hectares. Eight concessions were also granted for mining surveys in regions that have not been thoroughly explored and for the erection of smelters in the States of Chihuahua, Guanajuato, Jalisco, and Oaxaca. Attention was attracted to the deposits of zinc in the States of Nuevo Leon and San Luis Potosi.

The water supply and sanitation for a part of Tampico are practically complete. The Tuxpam-Tampico Canal is nearly completed. At Veracruz work has been commenced on the construction of the main sewers for the surface drainage of the land reclaimed from the sea. The port works at Coatzacoalcos, Salina Cruz, and Manzanillo are progressing satisfactorily.

RAILWAY AND OTHER DEVELOPMENTS.

To the railway system of the Republic 370.5 kilometers were added in 1904–5, making the total aggregate length 16,866 kilometers. Additions were the National on the San Miguel to Monterey division, the line from Carpio to Temosachic, from Chihuahua to Ojinaga, from Linares to the mineral of San Jose, the Atlamajac line, and the Pan-American. The military railway uniting Vigia Chico with Santa Cruz de Bravo, in the territory of Quintana Poo, has reached its terminus. On the road from Guadalajara to Manzanillo construction work was resumed between kilometers 198 and 207. A contract, subject to sanction by the legislature, has been made for constructing a railway to unite the States of Sonora, Sinaloa, Jalisco, and the territory of Tepic with the railway system of the country.

Between Victoria and Tula 4,560 meters of a wagon road 6 meters wide have been laid, and 63 kilometers of the road from Chiapa de Corzo to the Guatemala border. The repairs to the road from Tepic to San Marcos have been completed for a length of 124 kilometers.

The gunboats *Bravo* and *Morelos*, built in Italy, were satisfactorily received, and the new war transport of 1,600 tons, ordered in Italy, will be delivered at the close of the present year.

PUBLIC SAFETY AND HEALTH.

This has been maintained throughout the country except in the State of Sonora, where small bands of Yaqui Indians have committed assaults and murders on the highways.

The measures which the superior board of health inaugurated in 1903 to combat the yellow fever have proved effective in preventing the spread of this scourge. From July 1, 1904, to January 1, 1905, only 38 cases were reported, as compared with 83 for the same period of the preceding year. At Veracruz not a single case was reported between the end of December and the 1st of July, when cases were observed. In the City of Mexico there were 16,535 deaths from all causes in 1904, the lowest figure in eight years, and 16 per cent lower than the annual average from 1899 to 1903. In deaths from avoidable diseases the diminution was especially noteworthy. Deaths from

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typhus, for example, in 1901 numbered 1,379; in 1902, 1,338; in 1903, 515, and in 1904, 248. Deaths due to smallpox in 1903 numbered 216, in 1904 only 102.

The superior board of health is now making a special study of malaria, which has spread to an alarming extent and assumed epidemic proportions in Mulege, Lower California, and at El Dorado, Sinaloa.

MEXICO'S MONEY.

A NEW COPPER PIECE INTRODUCED.

The Mexican Government has introduced as a circulating medium a new copper coin with an intermediate value between the 1-centavo copper piece and the 5-centavo nickel piece. On this subject Consul-General Parsons furnishes a synopsis of an address recently delivered by Finance Minister Limantour before the Chamber of Deputies. The minister, in reviewing the monetary situation, in part said:

In the issue of new coins the proportion of alloy has been altered, putting them on a par in purity with the silver coins of other countries of the world. As under the new regulations the silver 5-centavo piece would have been smaller even than heretofore, a coin of nickel has been substituted, and as the new silver pieces coined, 10, 20, and 50 centavos, bear to each other the proportion of 1 to 2 and 2 to 5, it was deemed desirable that a copper piece should be coined intermediate in value between the 1-centavo copper piece and the 5-centavo nickel piece, which would bear to these pieces the same relation. Consequently a 2-centavo copper piece has been coined, which will be of much use in transactions with coins of the smaller denominations. The peso remains, of course, the standard of value, equivalent now, however, to the fixed value of $0.498 gold, such value having been arrived at on the basis of the contents of the peso, 24.4388 grams of pure silver, equal to 75 centigrams of pure gold.

The President, according to Mr. Limantour's statement, wishes to retain certain powers, such as the power to demonetize coins which it is desirable to withdraw from circulation, and to change, if found desirable, the design of the silver peso and to make foreign gold coins legal tender for a limited period.

Mr. Limantour estimates the loss to the treasury in the reduction of mining taxes at $3,600,000 Mexican currency annually, such reduction being based on an annual production of $105,000,000 Mexican currency of gold and silver. He feels that this reduction, together with the steps taken by the Government to expedite the sale of silver bars, will compensate the miners for losses due to the curtailment of the free coinage of silver. The means through which Mexico is given a stable currency mark the most important step in advance in many years. Their enactment has greatly encouraged the investment of foreign capital in Mexican enterprises.

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INVESTMENTS IN SONORA.

AMERICAN CAPITAL IN MINING INDUSTRIES.

Consul Hostetter, of Sonora, reports that preparations are being made by American capitalists to erect a smelter in Sonora and a hotel at Guaymas. He also reports that there are good opportunities for profitable investment in garden farming. The report follows:

New York capitalists have been represented here for the last three months, looking into the question of erecting a custom smelter in Sonora. Two hundred acres of land have been purchased at Guaymas and work will be commenced at once on a smelter of 250 tons daily capacity. Actual work will be started by November 10, and the smelter completed by April, 1906. The land purchased is the best available there, as it has both railroad and deep-water connections. The smelter will be a boon to the mine owners of Sonora and Sinaloa that are now operating, and will make a large number of properties very valuable that are not now being worked, owing to the nearest smelter being about 600 miles distant, and ores must be very valuable to stand such a long haul plus smelter charges.

It is also proposed to build a large hotel, of first-class accommodations, for its salaried employees from the States, as well as fifty additional rooms for transients. The hotel site is ideal, as it is on an elevation overlooking the bay of Guaymas out into the Gulf of California. With such a hotel Guaymas will be a dangerous rival as a winter resort, as fine fishing and hunting are to be had in plenty. They also expect to operate a brickyard, to make the brick for smelter and hotel, having secured a sand having 95 per cent silica and supposed to make the best quality of fire brick.

There are good opportunities here for market gardeners, as, having the richest of soils, we have but few vegetables in the summer months and most all consumed have to be imported from Los Angeles. Market gardeners understanding their business have splendid opportunities here and would be well repaid on any investments made, as most any and every thing can be raised here.

SHIPMENT OF CANADIAN APPLES TO LONDON.

Consul-General Holloway, of Halifax, writes that the shipments of apples from Halifax for London this season have amounted to 126,966 barrels, and the average net price to the growers of Nova Scotia has been $2.50 per barrel, showing a total net return of $317,415. The crop this season will turn out less than an average, though shipments to date are not far behind the record at the corresponding date last year. Apples have been coming forward freely. Ribstons and Kings have turned out good, but Baldwins are short, and consequently shipments after the new year, when the harder fruit is due, must fall off. The prices ruling this season are as high as any attained during the past ten years. The average shipment from Halifax to London during the past ten years has been 238,664 barrels per season.

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SOUTH AMERICA.

THE ARGENTINE REPUBLIC.

AGRICULTURAL IMPLEMENTS—STEAMSHIP SUBSIDIES.

LABOR-SAVING MACHINES FOR FARMING—SMALL MOTORS IN DEMAND—USE OF ELECTRICITY STEADILY INCREASING.

Daily Consular and Trade Reports for November 20 contains a letter from Special Agent Hutchinson on the use of agricultural implements in Argentina, in which valuable information in regard to the trade in that kind of machinery is furnished. The following letter from Mr. Hutchinson, written from Buenos Ayres on October 11, is in the nature of a continuation of the letter already published. It contains interesting facts relating to the use of motor machines in Argentina and furnishes suggestions that will prove profitable to manufacturers of those machines. The United States already has a large and growing trade in these machines, being double that of our two principal competitors—England and Germany. Mr. Hutchinson declares that our present favorable position can be maintained only by persistent effort and vigilant attention to the needs of the market. English and German agents are constantly in the field, and American manufacturers should also have agents in Argentina to improve the opportunities that are constantly presenting. Mr. Hutchinson writes:

The labor troubles which have been disturbing Argentina for some time past have drawn new attention to the country's need for small labor-saving machines, and within the last few days I have received inquiries which indicate that the purchases of such machines from the United States may be considerably increased in the near future. Argentina has an area of some 1,120,000 square miles and a population of only 5,000,000. One-fifth of the people live in the city of Buenos Ayres, leaving only 4,000,000 for the entire remaining area of the country, and a density of population outside the city of 3½ to the square mile. In spite of this sparsity of population, however, the industries of the country are of such importance that the annual exports of merchandise reach a sum of $255,000,000, or $51 per capita. (The total annual exports from the United States are about $15 per capita.)

MOTOR MACHINES FOR FARMS.

Such a country must economize labor in every possible way, and all producers here, large and small alike, are more than ready to welcome the introduction of labor-saving machinery. They naturally look toward the United States as the chief source of supply. Attention has been turning, in the past few years, particularly toward one class of labor-saving machines—small motors for the farm, the ranch, and the workshop—and abundant evidence of the importance of the new

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development is furnished by the official figures of the foreign purchases of such articles. The total imports of motors, operated by wind power, water power, gas, petroleum, naphtha, or electricity, for the five years from 1895 to 1899 averaged $157,000 per annum; for the five years from 1900 to 1904 the average was $406,000. In 1904 the imports were $754,000. This large increase has been due mostly to increased purchases from the United States, the figures that follow showing the average annual value of imports of windmills and all other motors for the two periods stated:

From—	1895–1899.	1900–1904.
United States	$70,200	$245,600
England	58,900	65,400
Germany	8,000	58,200
Italy	5,700	32,600
Switzerland	.....	10,000
Belgium	12,100	6,700
All others	2,500	7,700
Total	157,400	426,200

The United States has more than trebled her sales and now supplies 55.5 per cent of the total as compared with 44.6 per cent for the first of the two periods.

MOTORS OTHER THAN WINDMILLS.

Since 1900 the Argentine official statistics have made a separation between windmills and other motors, and the figures show that we are much more successful in the former than in the latter. Out of a total of $183,000, imports of windmills in 1904, the United States furnished $178,800. Our only competitor was England, whose exports were less than $4,000. The growth of the trade is shown by the fact that while the imports from the United States from 1900 to 1904 averaged $128,000 per annum, they rose to $178,800 in 1904. In "other motors" the United States holds the leading place, but is far from having a monopoly of the trade. The annexed table shows, by countries, the average annual value of motors other than windmills for the five years ending with 1904, and the value for the year 1904 apart from the preceding years.

From—	1900–1904.	1904.	Percentage of total, 1904.
United States	$98,000	$229,000	40.1
England	64,000	124,000	21.7
Germany	58,000	110,000	19.3
Italy	33,000	75,000	13.1
Switzerland	10,000	23,000	4.0
Belgium	6,000	9,000	1.6
All others	7,000	1,000	.2
Total	276,000	571,000	100.0

The United States, therefore, not only holds the leading place, but is increasing her lead, having 40.1 per cent of the trade in 1904 against 35.5 per cent for the average of the whole five years, while England's share has fallen from 23.2 to 21.7 per cent and Germany's from 21 to

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19.3 per cent. Italy's share has risen a little, from 12 to 13.1 per cent, but her exports are so small compared with ours that she can not be regarded as a very serious competitor. Switzerland's contribution consists mainly of water motors made to specification; the total amount is small.

AMERICAN MACHINES EXCEL.

The reason for the commanding position held by the United States seems to lie in the fact that our manufacturers excel in the production of small and inexpensive motors, these kinds being in strong demand here. The average value of motors imported from the United States in the five years 1900–1904 was only $99 per motor; those from Germany averaged $209; Italy, $275; England, $419; Belgium, $939, and Switzerland, $2,000. There is every reason to believe that the principal demand will continue to be for these small motors, and it is in this direction that our exporters should continue their efforts.

The motors wanted are of all kinds, from electric fan motors up to 4 or 5 horsepower gasoline engines for use on the estancias. In the towns there is steadily increasing use of electric power for small industries. Not only is Buenos Aires well supplied with electric service, but many of the interior towns have their electric lighting plants, and wherever persistent efforts have been made to introduce small motors they have met with success. The Germans are particularly active in the matter and there are recent instances in which their goods have been pushed so energetically in new fields as almost to exclude the American. The moment a concession is made for the erection of an electric plant in a new place, German agents are to be found on the spot getting contracts for the installation of motors, thus gaining the advantage which comes from being first in possession of the field. There are openings at present at many interior points, notably Rosario, Santa Fe, Parana, Concordia, and Corrientes. At the last-named town an electric plant is now in process of construction and will be completed in a few months. It is being built by a German company.

CONSTANT ALERTNESS REQUIRED.

On the ranches, or estancias, electric power is, of course, as a rule, not available, and the motors needed must be operated by kerosene, gasoline, naphtha, etc. They are put to a multitude of uses, the principal ones being the pumping of water (as supplemental to windmills), the shearing of sheep, the chopping of fodder, etc. It is said to be chiefly in motors of this sort that the English have their hold on the market, and it is a position from which it is particularly difficult to dislodge them, because so many of the estancias are owned or controlled by Englishmen.

In short, while the United States has a large and increasing share in the motor trade here, selling nearly as much as her two chief competitors (England and Germany) combined, it is a position which can be maintained only by continued alertness to the needs of the market. Our competitors, especially the Germans, are peculiarly wide-awake and pushing, and it would be a mistake for our manufacturers to rely too exclusively on the superior excellence of our machines. Agents should be constantly in the field on the outlook for opportunities.

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STEAMSHIP SUBSIDIES.

MOVEMENT TO INCREASE THE MARITIME POWER OF THE REPUBLIC.

The following report of a bill to subsidize ships, introduced into the Argentine Chamber of Deputies, is from Minister Beaupre. It not only furnishes the text of the bill, and the legislation proposed, but it affords a good idea of the maritime movements now going on in Argentina. It is interesting to note the leading features of the proposed bill and the eagerness with which those familiar with Argentine conditions cater to the trade of the Republic. All parts of South America are opening up. Argentina is only a little more eager than the others. That is due in large part to the peculiar position of the country and to the fact that it is enormously rich in certain kinds of raw or semiraw products needed by other nations. The report follows:

A bill was introduced into the Chamber of Deputies on August 7 providing a subsidy of $25,000 gold per round trip between the ports of this country and Europe under certain conditions.

The bill, called the Luro bill, provides in general as follows:

That the time to be allowed for the journey between the various ports of the two countries shall be between this port or that of La Plata and—

1. Hamburg and vice versa, fourteen days and a half.
2. Antwerp and vice versa, fourteen days.
3. Genoa, Naples, Boulogne-Sur-Mer, Liverpool, Dunkirk and vice versa, thirteen days and eighteen hours.
4. Cherbourg, Havre, Southampton and vice versa, thirteen days and a half.
5. Marseille or Bordeaux and vice versa, thirteen days and a quarter.
6. Barcelona and vice versa, thirteen days.
7. Vigo and vice versa, twelve days and a quarter.

That, in addition to this fixed time, six hours shall be allowed on the voyages from Europe to the Argentine Republic to cover delays in entering and leaving ports. And on the voyages from this country to Europe eighteen hours shall be allowed for the difference in time and for delays in entering and leaving ports. In case the voyage is made to or from Bahia Blanca, the time required for the railway journey between the capital and that city shall not be included in the above.

That, aside from the European ports, only one stop shall be allowed, and that shall be at one of the islands of the Atlantic, to take on coal.

That the companies or firms competing shall offer or promise to build a sufficient number of steamers to make two voyages per month from Argentine ports and two voyages per month from European ports.

That the firm that secures the contract shall enjoy the subvention specified in its contract, not more than 25,000 pesos gold for each round trip or more than 50,000 pesos gold per month during ten years, beginning with the date of the first trip, which will be diminished by 1,000 pesos gold for every hour's delay beyond the time specified.

That the steamers shall sail under the Argentine flag and that the

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Argentine Government shall have the right to expropriate them in case of war, paying for them 8 per cent more than their value as fixed by experts.

That the public ministers and delegates of this country shall be carried at half price, and that the Government shall have the right to incorporate in the officers' staff and crew of each boat two officers, ten sailors, and ten stokers of the national navy.

Such are the general conditions of the bill as at first proposed. I am informed that alterations have been made in the committee to which it was referred, upon the representations of the resident steamship agents. Among other things the fine of $1,000 gold for every hour's delay has been reduced to $500 gold.

COUNTER PROPOSALS.

This matter has aroused great interest among the steamship companies, and one or two of them have made counter proposals. The Royal Mail Steam Packet Company has proposed to establish a fast service between Buenos Aires and Europe, and offers two alternative propositions:

(1) To establish a direct monthly service between this city and Europe, and vice versa, without touching at Montevideo or at the ports of Brazil, calling only at the island of Teneriffe outside of Europe. Between that island and Southampton the vessels shall take their usual course, touching at Lisbon, Vigo, and Cherbourg, and vice versa, on the outward voyage. They agree to make the trip from Buenos Aires to Lisbon in sixteen days and to Southampton in nineteen days. In return the company is to receive £5,000 per round trip.

(2) The alternate proposition is to establish a monthly service, touching only in Rio de Janeiro, proceeding thence direct to Lisbon, Vigo, and Southampton and vice versa. In this case the voyage from Buenos Aires to Lisbon shall occupy fifteen and three-fourths days, and that from Lisbon to Buenos Aires fifteen and one-half days; and the company is to receive £3,500 per round trip. I am told that neither of these propositions is seriously considered by the other steamship companies interested in the matter, inasmuch as by its terms the Royal Mail Steam Packet Company offers nothing more than it is doing at present, or is known to be capable of doing, except to cede its traffic with Brazil. They are, however, occupying the attention of Congress; what action it may take is of course unknown.

COMPETING LINES.

The Italian Lloyd, a new company that is building ships for cargo service, which it is soon to inaugurate, has proposed to build ships for a fast passenger service. The details of its proposals are unknown to me. There are at present not less than nine lines competing for the first-class passenger trade between this city and Europe, viz:

1. The Royal Mail Steam Packet Company with a fleet of six first-class steamers and a bimonthly service, which is to be increased on October 15 to a weekly service between Buenos Aires, Montevideo, and all Brazilian ports and the principal ports of Europe to Southampton.

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The Hamburg Sud Amerikanische Dampfschiffsgesellschaft (the Hamburg South American Steamship Company), with some five steamers and a bimonthly service between this city, Montevideo, Vigo, Dover, Boulogne, and Hamburg.

3. La Compagnie des Messageries Maritimes (French Maritime Packet Company) with a bimonthly service between this city, the ports of Brazil and Bordeaux.

4. Two Italian companies that are operating in unison, La Navigazione Generale Italiana, La Veloce, and a third line recently assimilated to them, with a large fleet and a weekly service between this city and Spanish and Italian ports.

5. The Pacific Steam Navigation Company with a large fleet and an approximately bimonthly service between the ports of the Pacific and Liverpool. These vessels call at Montevideo, and have arrangements for booking direct from Buenos Aires, the passengers being taken on board at Montevideo.

6. The New Zealand Shipping Company with a monthly service between New Zealand and Australia and London. These vessels call likewise at Montevideo and maintain a direct passenger service between Buenos Aires in the same manner as the Pacific Line.

7. Compañia Transatlantica Española (the Spanish Transatlantic Company) with a bimonthly service.

These are the lines of first importance, having each of them a fleet of modern vessels and a regular service, and they cater alike to the highest class of traffic.

8. The Nelson Line with a fleet of 14 vessels of from 5,000 to 7,000 tons each and a bimonthly service between La Plata and Liverpool.

9. The Houston Line with a bimonthly service between this city and Glasgow or Liverpool.

These nine lines have a regular first-class passenger service. There are others that carry passengers, such as the Houlder Line, the Prince Line, the Lamport and Holt Line, etc., whose sailings are not fixed. These are primarily freight lines with passenger accommodations.

UNPRECEDENTED ACTIVITY.

The last twelve or eighteen months have witnessed an unprecedented activity in shipping circles. The Germans took the initiative last year, the Hamburg South American Line practically replacing its fleet of old vessels by steamers of modern construction, accommodations, and capacity. The Royal Mail, the Pacific, and the Italian lines at once followed suit. These three lines have modern vessels in construction. The first of the three vessels that the Royal Mail planned to construct, the *Aragon*, left Southampton on July 14, last, on her maiden trip to this country, arriving in this city August 6. This vessel is in every respect modern, of 10,000 registered tons; in size and equipment she surpasses every craft thus far sent to this port as well as every craft thus far planned for the service of the River Plate except two sister ships now on the ways, of which the *Amazon* will make her maiden trip in March or April next, and the *Araguaya* a little later.

The Pacific Steam Navigation Company has two passenger steamers, the *Ortega* and the *Oronsa*, on the ways. They are each of 7,000 tons gross register and thoroughly modern in construction and equipment.

The combined Italian lines have some six modern vessels in con-

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struction, none of which, I am informed, will equal the *Aragon* in point of size, but all of which are planned to surpass her in speed by perhaps half a knot, the speed of the *Aragon* being about 15 knots.

In addition to these new vessels of modern accommodations for passenger service, three new lines have been, or are about to be, established—one now runnning between Gothenburg (Sweden) and this port; the Italian Lloyd, above mentioned, with cargo vessels in construction, and an Austrian line between Trieste and Buenos Aires.

With this unwonted activity in shipping circles, with every company vying with its competitors to surpass them in appointment and capacity, and every European country having established national lines or making new efforts to establish national lines; in view of the increased prosperity of this country, as shown in the last three years, and its promising outlook for the future, and in view of the growing trade of the United States with this country, the percentage of increase of which surpasses that of any other country, this would seem to be the propitious moment for the establishment of a direct American service between the ports of the United States and the ports of the Argentine Republic. The Luro bill is evidence of the readiness of this Government to do its share toward securing better means of communication with the other countries of the world if such evidence were needed. The Argentine Republic has always shown itself ready to cooperate in the establishment of a regular mail and passenger service with the United States and is to-day no less ready, I believe, than twenty years ago.

PARAGUAY.

FIELD FOR AMERICAN ENTERPRISE.

THE COUNTRY AND ITS RESOURCES—AMERICAN IMPLEMENTS AND TOOLS PREFERRED—ENCOURAGEMENT FOR FOREIGN INVESTMENTS.

The following letter from Special Agent Hutchinson, written from Asuncion, September 25, is a continuation of his previous letter from the same place in which he called attention to openings for American trade and investment in Paraguay. The Government and people are aroused to the importance of the speedy development of the country, and liberal offers in the way of concessions are being made to induce the investment of foreign capital. Mr. Hutchinson's letter is based on existing conditions, and as the ruling classes are in favor of encouraging the investment of foreign capital he thinks that these conditions are likely to continue. In implements and tools of various kinds Americans are in the lead, and with a proper effort trade may be largely increased in these and other manufactured products during the agricultural and industrial development, the inauguration of which may reasonably be expected in the near future.

In my report, dated at this place, Asuncion, September 18, I sought to explain the general features of the industry and commerce of Paraguay, and I expressed the opinion that American exporters would do well to concentrate their efforts on those articles which are needed for

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the development of the rural industries of the country. To give a clearer idea as to just what these industries are, it is necessary to examine them somewhat more in detail and to explain the methods by which they are carried on. The chief industries of the country are, as has already been explained, agricultural, grazing, and those concerned with the gathering of the various products of the forest. Their details can best be learned by examining the activities of some of the larger colonies and villas, and I have, therefore, compiled the following information:

ACTIVITIES OF CITIES AND VILLAS.

Villa Hayes, on the Paraguay River, some distance north of Asuncion, has a very varied agricultural industry, producing sugar cane, maize, beans, mandioca, sweet potatoes, alfalfa, tobacco, onions, oranges, and various other fruits. Its only manufacture of any importance is the extraction of the juice of the sugar cane and converting it into the crude spirits known as caña, of which it exports considerable quantities (some $25,000 worth per annum) to Asuncion.

Villa San Bernardino, about 20 miles east of Asuncion, on Lake Ipacaray raises tobacco, fruits, and coffee to some extent, and a brewery has recently been established, but its principal activity is the raising of sugar cane for the production of caña.

Villa Rica, 90 miles southeast of Asuncion, in the heart of Paraguay Oriental, about midway between the rivers Paraguay and Upper Paraná, is likewise mainly agricultural, though it has some small manufacturing industries in the making of bricks and tiles, caña, lace (a purely "domestic" industry), and the loosely rolled cigars so much smoked by the native Paraguayans. The agriculture is mainly devoted to the raising of tobacco, sugar cane, vegetables, and fruits, with some attention also to maize.

Villa Concepcion, about 130 miles north of Asuncion, on the river, besides the production of fruits, vegetables, etc., for local consumption, devotes its chief attention to the gathering of yerba mate and the raising of cattle, whose hides it exports in considerable quantities.

Colonia Nacional produces sugar cane, tobacco, wheat, maize, potatoes, peanuts, coffee, grapes, rice, and alfalfa. Maize meets with peculiar success here, as many as three crops a year being sometimes produced.

Elise Colonia is also agricultural, producing mainly tobacco, sugar cane, coffee, and ramie fiber.

Colonias Nueva Alemania and Veinte Cinco de Novembre are partly agricultural and partly pastoral, the principal agricultural products being similar to those already mentioned, and the chief pastoral product being cattle hides for export.

EXTENT OF AGRICULTURAL INDUSTRIES.

These are only a few of the many "colonies" and "villas," but they are among the most important, and their products are characteristic of the industries of these communities. It will be seen that they are mainly agricultural. The exact extent to which these agricultural industries are carried on, the area under cultivation, and the amount of the annual product it is very difficult, if not impossible, to determine. There are no satisfactory statistics, and estimates based on

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mere observation can at best give only approximate results. It is said that the area under cultivation for mandioca is about 100,000 acres; for tobacco, 30,000 acres; coffee and cotton, only 500 to 1,000 acres each. Maize is an increasing crop, but there are no very reliable estimates of the area devoted to it. Rice was largely cultivated before the "great war," but the industry was virtually annihilated during the disturbances of that period, and it is only recently that the production has begun to recover. Sugar is one of the most widely cultivated crops, the annual product being in the neighborhood of 7,000,000 pounds. This is all consumed at home, and in addition there is a considerable importation of refined sugar from Argentina and elsewhere. The largest vegetable product of the country—yerba mate—can hardly at present be called an agricultural product, though it is somewhat difficult to classify it in any other way. While the country was under the control of the Jesuits the yerba mate was cultivated on a very large scale, but in the absence of the initiative furnished by that religious body and as a result of the disturbances of the great war, the cultivation has been allowed to lapse, and the dependence is now mainly on the product of the plant as it grows wild in the so-called "yerbales." Cultivation is, however, beginning to attract renewed attention.

The other large industries are cattle raising and the gathering of the products of the forest, mainly hard-wood lumber, and both are growing rapidly. The number of cattle in the country, which in 1890 was stated at 862,000, has risen to nearly 3,000,000, besides considerable numbers of horses, sheep, goats, hogs, and mules; while the increasing demand for quebracho and other hard woods, particularly in Argentina, has led to increased attention to the lumber interests.

ENGLISH IMPLEMENTS PREFERRED.

In speaking of these various Paraguayan industries, one must not be led into thinking of them as having any very close resemblance to similar industries in older or more highly developed countries. There is nothing like large cultivation, and very little that can be called intensive cultivation. The agricultural products, with hardly any exceptions, are raised on small patches of land and with the use of only the simplest implements. Hoes, spades, machetes, and in some instances a one-share plow are about the only implements demanded. Hoes and spades come here mainly from England, and I am told that they are preferred to the American because of their greater durability. The soil being sandy, it is said that the blades of the hoes and spades and the plowshares are worn away very rapidly. The machetes are also largely English, though German imitations, very much lighter and cheaper, have at times made serious inroads on the market. The natives seem now, however, to have learned that extreme lightness and cheapness do not pay in the long run and are returning to the use of the English implement.

FENCING WIRE AND WINDMILLS.

On the estancias, or cattle ranches, there is likewise relatively small demand for implements. The principal articles purchased abroad are wire for fencing (barbed or plain), corrugated iron for covering of

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sheds and buildings, and, where running water is not available, windmills. The wire comes principally from the United States and Germany. American wire seems to be preferred as being the better made and more durable, but the cheaper German, put up for shipment on reels closely resembling the American, has made considerable gains in the last few years. Windmills are almost wholly American, but their use is not nearly so extensive as it might be made if serious efforts for their further introduction were to be made by a resident agent. This last statement applies with even greater force to many parts of Argentina. In many of the great cattle regions of that country the land is either flat or slightly rolling, there is as a rule abundant rainfall, and hence abundance of underground water, but an absence of running streams and good natural watering places for the cattle. In the province of Entre Rios, for example, it is found necessary to build rude dikes of earth across little hollows in the slightly rolling land to dam up the water which runs in these hollows only during or immediately after heavy rains. The water thus collected is, of course, very shallow; and if a few weeks pass without rain to freshen it, it becomes stagnant and offensive and even injurious to the cattle. The more progressive cattlemen are learning, however, that good wells can be made almost anywhere by boring or digging comparatively a few feet. There is very seldom a period of long-continued calm, and a few windmills give them all the water needed. American mills are there, as everywhere else, preferred, and our manufacturers can have complete control of this new development if they will push the business before foreign imitations get a foothold.

CORRUGATED IRON SHEETS.

Corrugated galvanized-iron sheets I have also mentioned as being in demand on the ranches of Paraguay. But their use is not by any means confined to the ranches or to Paraguay, for this is a commodity whose use is becoming widespread in South America. From Pernambuco south to Buenos Aires and beyond one sees it put to a multitude of uses—for sheds, for roofing and even siding of dwelling houses, warehouses, railway stations, and factories; for roofing and siding of freight cars, and for roofing of passenger railway and tram cars. In some of the smaller towns of Argentina it is the sole covering of every house in town. In the hotter climates it is painted with specially prepared material to reduce the temperatures which might otherwise make the use of such a covering impossible.

The extent to which these corrugated iron sheets are used and the rapid growth of the trade are indicated by the following figures of imports into Brazil and Argentina: For Brazil the figures for 1902 and 1903 only are available, the imports for the former year being 3,209 metric tons, valued at $240,400, and for the latter year 4,177 tons, valued at $315,600. Argentine imports in 1893 were 10,827 tons; in 1903 they had risen to 34,000 tons. Paraguayan imports, though of course much smaller than the Argentine, have probably increased in like proportion.

In Brazil the United States seems to have made but little progress as a provider of these goods, but there is every indication that we are now gaining a foothold in the more southern markets. The United States first appeared as an exporter to Argentina in 1894, the export

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for that year amounting to 45 tons; since then there has been steady growth, and our annual shipments now reach over 2,500 tons. Comparing the five-year period 1899–1903 with the preceding period, 1895–1898, it is found that the following were the imports into Argentina of corrugated galvanized-iron sheets in metric tons:

From—	1895–1898 (per annum).	Per cent of total.	1899–1903 (per annum).	Per cent of total.
Germany	288	1.4	604	2.3
Belgium	572	2.7	1,010	3.8
United States	1,390	6.6	2,228	8.5
England	18,712	88.6	22,009	83.8
Others	155	.7	406	1.6

The United States thus stands second to England, but her share is still extremely small, being only about one-twelfth of the total. But the increase from 6.6 to 8.5 per cent while England's share has declined from 88.6 to 83.8 per cent indicates that there are no insuperable obstacles to our becoming a strong competitor, possibly in the near future. The retail price of the English goods in Asuncion is at present 4.3 cents per pound. In Buenos Aires it is about the same, less the freight of $3.87 United States gold per ton from Buenos Aires to Asuncion, which the goods sold in Paraguay have to bear.

PRIMITIVE METHODS.

The hard-wood industry of Paraguay at present demands few foreign goods except axes and a few other simple implements, such as machetes. Although the shipment of hard-woods is so large a business in a country whose forests abound in valuable timber, the methods employed are on the whole very primitive. The brush is cleared where necessary by the machete, the tree is chopped down and the log squared by the ax, and the rough beam thus produced is usually shipped without further preparation. Some sawing into boards is done, but usually without the use of any modern appliances. Hand saws seem to be used for the most part, and where power is employed the machinery is of the simplest kind. Plans are, however, on foot for the establishing of several new and well-equipped mills in connection with large timber concessions in the "Chaco" and elsewhere.

The axes at present used are almost wholly of American make, the "Collins" being virtually the only one in the market. Attempts have been made here as in Brazil to introduce a German imitation, but with very little success so far as Paraguay is concerned.

NEEDS OF THE COUNTRY.

This brief description of the principal industries of the country will, it is hoped, give a clear idea as to the directions in which trade may be increased under present conditions. These conditions may, however, be expected to change slowly. The policy of the ruling classes is distinctly in favor of encouraging investments of foreign capital; valuable concessions are being made of lands, timber, colony rights, etc., with tax reductions and tariff exemptions, and efforts are being made to guarantee security to investors. New railroad extensions are

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contemplated, land has already been purchased for a large meat-extract plant, concessions are under discussion for the installation of electric tram, lighting, and power service in the capital and some of the larger outlying towns. The crying needs of the country are for capital and labor, but with the former will follow enough of the latter to develop the rural industries far beyond their present stage. Sawmills, with all the necessary modern equipment for handling and shipping hard-wood timber and lumber, might greatly increase the export trade in these goods; sugar mills, on a large scale, could at least supply the home demand for sugar and put an end to the present imports. Meat and pork packing establishments and tanneries might easily greatly increase the scope of the grazing industries. The cultivation of the yerba mate and proper effort to introduce the product into European or American markets might readily multiply many fold the importance of an industry which is now hampered by the narrowness of a market which is confined to three or four of the South American countries. Developments of the kind outlined have already been begun, and all signs point to their continuance. And with the expansion of industries will necessarily come a growth, even greater than that of the last few years, in Paraguayan import trade. It would be particularly favorable to American trade if the coming improvements might be made by American capital.

TARIFF REVISION CONTEMPLATED.

In this connection it should be added that the Paraguayan Congress is now contemplating a complete revision of the tariff, which, by making the schedule prices on which the present ad valorem duties are calculated correspond more nearly to the real market prices, will greatly reduce the duties collected. I am told by those in a position to know that the revision is almost certain to be adopted.

Altogether, one can not visit this country, even for a brief stay, without being convinced that a new era is dawning and that there is abundant opening for American investment and trade if the right kind of efforts are made; and the most essential step that must be taken in order to secure the advantages arising from the new conditions will be the sending to the country itself of expert agents or commissioners to operate directly in the field. It has been the custom to rely far too much on representatives resident in Buenos Aires or Montevideo, forgetting that Paraguay is a very different country from either Argentina or Uruguay, and that it is far too distant from either of them to make it possible for a resident there to keep closely in touch with Paraguayan affairs. It is a week's trip from Buenos Aires upstream to Asuncion, and four days are required for the return.

NATIONAL PROGRESS.

INDUSTRIAL ACTIVITY—EXPOSITION THAT SHOULD INTEREST AMERICANS.

In the following letter Special Agent Hutchinson directs special attention of our manufacturers and others interested in trade with Paraguay to plans that have been effected for holding expositions with a view to promoting industrial activity of that country. Special

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inducements are offered to manufacturers of every description of tools and certain kinds of large machinery, and liberal treatment is assured exhibitors. The earnestness of the Government and people of Paraguay to advance their commercial and industrial interests is illustrated by the fact that it is proposed to send a number of young men to foreign countries for instructions in the agricultural industry. Mr. Hutchinson's letter follows:

In previous reports on Paraguay I have called attention to the fact that a new development is noticeable there in all of the national industries. Foreign capital is being invested in greater quantities probably than ever before, and the leading men of the country are showing lively interest in whatever promises to aid in the improvement and extension of industrial activity. A striking example of this new interest is found in the plans just completed by the National Agricultural Society (Sociedad Nacional de Agricultura) for an annual agricultural exposition, the first of which is to be opened on May 15, 1906. The executive committee of the society having in charge the plans for the exposition are extremely anxious to interest American producers of agricultural implements and machinery and similar articles, and are offering special facilities to induce them to make exhibits. It is recognized that the agricultural, grazing, and forestry industries of Paraguay are of a kind whose future development demands the introduction of just the kinds of machinery, implements, and methods in which the United States leads the world, and one of the primary objects of the exposition is to acquaint the Paraguayan people with the kind of improvements which might be made.

SIMPLE AND INEXPENSIVE MACHINERY WANTED.

I have previously alluded to the fact that the population of Paraguay is very small. Immigration and natural growth are rapidly increasing the numbers of the people, but in spite of that it will be many years before anything like a dense population will be possible. Meantime one of the principal means for increasing the production of the country must be through making the available labor power as efficient as possible through improvement of methods and the use of labor-saving machinery. And this is what the agricultural society has in mind. It must be remembered, however, that Paraguayan industries are, with a very few exceptions, carried on on a small, almost domestic, scale. Implements and machinery must, therefore, be simple and inexpensive, easily operated, and easily repaired; and new processes must be of a sort to be readily explained to a people accustomed as yet to none but the most primitive methods. It will do little good to send to the exposition complicated or expensive machinery intended for large-scale industries.

PLANS OF THE EXPOSITION.

The executive committee of the society has just completed a pamphlet giving full details of their plans, and I inclose herewith a copy in Spanish. The following are the more important items:

(1) The exposition will be opened to the public on May 15, 1906, and continue till the middle of June.

(2) Persons wishing to exhibit should notify the executive committee

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before January 1, 1906, specifying the amount of space they will require. (Address Comite Ejecutivo, Sociedad Nacional de Agricultura, Asuncion, Paraguay.)

(3) Foreigners wishing to do so may, at the close of the exposition, allow their exhibits to remain in the permanent exposition which will be established.

(4) The exposition is to be a market as well, and exhibitors wishing to place their goods on sale will be allowed to do so. For this purpose the executive committee will, if desired, act as agents for the exhibitors without charge, receiving orders and attending to the necessary details.

(5) A large field is provided for experimental purposes, and facilities will be given and free labor provided for practical exhibitions of the operation of machines, etc.

(6) Tariff duties on exhibits will be remitted, and freights will be advanced by the executive committee, with the proviso that they are to be paid by the exhibitor if the goods are sold.

(7) Medals and honorary diplomas will be distributed at the close of the exposition.

SOME OF THE SPECIAL EXHIBITS.

(8) The programme includes exhibits of the following items which will be of especial interest to American producers:

Plows, cultivators, and sowers. Machines for the cultivation of and the manufacture of products from coffee, rice, mandioca, maize, peanuts, cotton, tobacco, sugar, etc. Especial attention is invited to methods of extracting sugar by the diffusion process. Presses, particularly for tobacco, yerba mate, and cotton. Machines and processes for the manufacture of starch, meals, etc. Saws and implements for forestry purposes. Cheese and butter making machinery. Machines and constructions for aviculture, apiculture, sericulture, horticulture, and arboriculture. Machines and processes for the extraction of vegetable oils. Machines and processes for the treatment of vegetable fibers. (The committee will forward to Washington a collection of samples of fibers produced in Paraguay.) Various kinds of "rural constructions," houses, sheds, mills, etc. Incubators. Live plants, such as tobacco, cotton, and vines. (Particular interest is manifested in California vines. The climate of Paraguay is not unlike that of the vineyard sections of California, and it is thought that some species of California grapes may be found well adapted to conditions here.)

EDUCATIONAL MOVEMENT.

In addition to this effort on the part of Paraguay to give her people a practical illustration of the ways in which their activities may be made more productive, there is a movement on foot for the sending out to foreign countries of a considerable number of promising young men to learn what is being done in the agricultural industries elsewhere. The national Government has already voted an appropriation to send abroad 100 such men from 18 to 22 years of age, to be educated in foreign agricultural schools. It has not yet been decided where they are to go, but there is a strong party who urge their being sent to the United States, and those interested are very desirous of having sent to them circulars, announcements, curricula, estimates of cost of liv-

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ing and other expenses, etc., from the various agricultural schools of the United States. Such communications should be addressed to Senor Enrique Solano Lopez, Comite Ejecutivo, Sociedad Nacional de Agricultura, Asuncion, Paraguay.

Both of these movements are indicative of the feeling in Paraguay toward the United States. The leading men recognize that we have much in improved methods and machinery which would enable the country to develop its natural resources. It is to be hoped that our people will meet them halfway.

URUGUAY.

THE CATTLE INDUSTRY.

HIGH PRICES PAID FOR BREEDING BULLS.

Consul O'Hara, of Montevideo, reports great progress in Uruguayan and Argentine cattle raising. He says the breeding efforts are remarkable and cites the payment of more than $18,000 for a single breeding animal. He writes:

The River Plate country, which includes the Republic of Uruguay and a great portion of the Republic of Argentina, has long been included among the leading stock-raising districts of the world. For generations the people of this section looked upon the ranch as about the only source of material wealth. They were in past years and to a very large extent still are a meat-eating people, and have given but little attention either to general agriculture or to truck farming. The cattle of the country needed no special care, as grass of the best quality for maturing and fattening grew in great abundance over this entire country and remained fresh and green during the whole year. The climate is such that domestic animals needed neither grain nor shelter. Until recently the cattle of this country were not domesticated, but roamed the plains almost at will, in a semiwild state. They were allowed to breed and inbreed without any care or attention from the owner. At that time the sale of the hides was the only part of the industry that yielded the owner any cash, and the meat, except a small portion required for food, was discarded as of no value.

RECENT CHANGES.

In recent years, however, the meat-eating people of other quarters of the globe have been attracted to this section, and have not only provided a wider market for its products, but have given its chief industry their attention. A large market has been provided for cattle by the manufacture of beef extract, which is carried on here very extensively. The ever-increasing demand for leather has opened up this market and increased the price of hides, and the bones and horns find ready sale, with the result that the cattle-raising industry has become very profitable. As prices increased and the business yielded greater profits the ranch (or camp) owners gave more attention to the busi-

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ness. They have fenced their farms and have given attention to the improvement of breeds. Within the last few years freezing plants have been established, both here and in Buenos Aires, where meat is prepared for export. These establishments, although new, are already exporting annually several million dollars' worth of their product.

STOCK-RAISING REVIVAL.

As a result of these new markets a revival has taken place in the stock-raising industry, and this is most noticeable with respect to cattle. Thoroughbreds have been imported for breeding purposes, and the results have been so satisfactory that there is at this time a great demand for good bulls. The best class of animals, with good pedigrees, are sought, and are taken only from countries not infested with cattle diseases and which are subject to proper sanitary regulations. To give some idea of the earnestness of these people in their desire to improve the breed of their cattle and of the phenomenal prices resulting therefrom, I furnish a translation of a part of an article published in "La Razón," of this city, in its issue of September 25, 1905:

"The rich stock-raising industry of Argentina was yesterday marked by a truly sensational occurrence, which to-day will be enthusiastically commented upon, not only in Argentina, but in all the grazing regions of the world. We refer to the sale at public auction of the Durham bull 'Polikao 2d,' a red and white animal, calved March 23, 1903; sire 'Merchant of Venice' and dam 'Spot.' This animal was raised on the estancia (ranch) of the executors of the estate of N. Vivot, 'Retiro,' in Chascomus. The sale price of this bull was $40,000 ($17,087 American gold), but to this should be added the auctioneer's commission, which is paid by the buyers, amounting to $2,400 ($1,012 American gold), which makes a total of $42,400 ($18,010 American gold)."

AN ATTRACTIVE MARKET.

The stimulus given to cattle raising, arising from the conditions mentioned, and the scarcity of good bulls in this country will, in my opinion, make this an attractive market for many years to come, as the breeders will be compelled to go abroad to secure at least a portion of the necessary high-grade breeding stock.

Unsolicited, the great bulk of this business would go to the English breeders, for the reason that the English ranch owner is here, favoring the products of his own country, he would, in the natural order of events, give preference to his own people. But as the breeders of thoroughbred cattle in the United States have for many years been buying the very best breeding animals offered in the markets of the world and have given the subject their very best care and attention, with the result that the United States is able at this time to show as good, if not the best, thoroughbred cattle of any country in the world, it might be profitable to them to investigate this market.

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PERU.

MUNICIPAL ENTERPRISES.

LARGE THEATER AND HANDSOME BOULEVARD TO BE CONSTRUCTED AT LIMA—LOAN FOR BUILDING RAILROADS.

Consul-General Gottschalk, of Callao, furnishes the following report regarding municipal building and street projects in that city, both of which may afford good opportunity for American capital:

Among the numerous improvements which are being projected for the city of Lima is the erection of a new playhouse to be called the "Teatro Nacional." The building will be on a par with a number of handsome private edifices which have been put up of recent years, and the project is the result of a decided movement toward embellishing and otherwise modernizing a city which is one of the old historic towns of Spanish America. This movement is finding generous support among the wealthy and enterprising classes of the public, and is headed by Dr. Federico Elguera, the present alcalde (mayor) of Lima.

For many years all edifices in Lima were built of adobes, stuccoed and painted; or oftener yet of quincha, i. e., canes set upright and liberally plastered with clay, then painted over. In fact, there are to-day in Lima many pretentious buildings whose upper stories, on account of the prevalence of earthquakes, are built of no other material. Amusing as such modes of construction may appear to the stranger, there is still much to be said in their favor in a country where only two classes of edifices pass through earthquake shocks unscathed, either the unusually light and elastic or the very solid and compact; where the paucity of forests and quarries of soft stone have until recent years made ordinary building materials unduly expensive, and where the climate is so mild as to have hardly deteriorated constructions of this kind which have stood for fifteen or twenty years.

MODERN CONSTRUCTION.

The new movement toward embellishing Lima began some years ago under President Romana, with the modernization of the historic Plaza de Armas, the scene in former times of the autos da fe of the Inquisition, and to-day as handsome a public square as is to be found in any city of Lima's size, either in the United States or Europe. So great was popular prejudice at the time against any effort at modernization that the work of felling the old trees and carting off the old shrubbery was done between dusk and dawn, and without previous notice. Later, in accordance with the Peruvian love of avenues and gardens implanted by the Spanish viceroys, the Jardin Botanico, the gardens of the Exposicion, and the long promenade known as the Paseo Colon were successively laid out, to become favorite places of resort, as had been in the old days the Tajamar, the Paseo de Acho, and that of Descalzos. In former reports it was pointed out how much the city has gained in the way of telephone lines, electric railroads, electric light, street paving, etc., and now the public attention appears to be directed toward the erection of a newer style of buildings, which shall be handsomer, more durable, and more sanitary than the old.

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SPECIAL TAX FOR BUILDING THEATER.

The projected National Theater of Lima is to be situated on the Plazuela de San Juan-de-Dios, on Lima's principal thoroughfare, the Giron Union, and but a step from the electric cars to the port. Already a number of buildings have been expropriated and torn down. Congress has voted for the project a sum of £75,000 Peruvian ($364,988), to be derived from a special customs tax of 1 per cent on the invoice value of all imports through the port of Callao, which is to-day practically a suburb of Lima. Of this sum the municipality of Lima calculates to spend, more or less, $72,998 to $121,663 in buying up property and clearing a suitable site. The balance is to be spent on the edifice itself. The theater building, whose plans are now being drawn up by a foreign architect domiciled in Lima is, as stated above, to have a seating capacity of 1,600. It will probably consist of a parquette, a tier of boxes, a balcony above that, and again above that a gallery. It will be lighted throughout by electricity. The plans will call for a building of brick, with metal framework, and all the woodwork of cedar. Proposals for the actual work of building, for fittings, etc., may be submitted to Dr. F. Elguera, alcalde of Lima, or to the honorable municipalidad de Lima. Of course correspondence is desired only from firms of unquestioned standing.

HANDSOME BOULEVARD CONTEMPLATED.

Another development which is eventually to take place in Lima is the opening of a wide avenue through five solid blocks of houses in the heart of the business center. This project awaits the passing of a particular amendment to the expropriation law by Congress. I am unaware whether it is usual for firms or syndicates in the United States to undertake the construction of streets and avenues abroad, for a certain consideration in cash plus the title deeds to lots on either side the new thoroughfare, but the municipality of Lima will in time ask for proposals on this new project in something like the form above given.

Real estate holdings in Lima to-day are an excellent investment. Not only does rented property pay usually from 8 per cent to 12 per cent annual interest on the capital invested, but prices in the business and good residential districts keep continually rising. I was told the other day by a reliable person who owns property on the Paseo Colon that his ground which two years ago he had paid for at the rate of 2½ soles per square meter he was now being offered 12 soles for. And it is highly probable that with the introduction of electric traction for the Lima tramways next year (now a certainty) property, even is distant neighborhoods, will likewise increase in value.

CONSTRUCTION OF RAILROADS.

Consul-General Gottschalk also reports that work on the construction of two railroads has begun, namely, the Oroya-Huancayo and Sicuaní-Cuzco. He writes:

On the Oroya-Huancayo line 15 kilometers of embankment are now ready, and on that from Sicuaní to Cuzco 25 kilometers of embankment and some 18 of rails have been completed. The work has been done by a British syndicate long domiciled in the country, The Peruvian Cor-

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poration, on contracts providing for the construction of sections of the roads. Both lines will tap a rich interior district of Peru, and it is expected that the Sicuaní-Cuzco, which will ultimately connect the ancient capital of the Incas (till now inaccessible by rail) with the existing Mollendo-Puno line at Juliaca Junction, will furnish the last-named road with a new lease of life, threatened as it has been with losing in part its Bolivian trade, owing to the contemplated construction of a Bolivian trade outlet through Chile.

I am informed on reliable authority that the negotiations which are being carried on in Germany (mentioned in my dispatch of October 10) are progressing very favorably, and that there is every prospect of raising the desired sum of 1,000,000 libras ($4,866,500 United States currency). This German railroad loan once effected we may naturally expect an influx of German rails, rolling stock, and other railroad material into Peru.

NATIONAL LOAN FOR RAILROAD CONSTRUCTION.

I have been informed that negotiations are in progress for the construction by a German syndicate of the lines of railroad projected by the Peruvian Government. These negotiations are said to be very favorably under way and to be based on the farming out to German concessionaries of the Peruvian internal-revenue tax on tobacco. Further security could be offered to the constructors of the road in question by turning over to them year by year a fixed item in the national budget of £200,000 Peruvian ($974,000) yearly set apart "for the construction of national roads and railroads."

A PERMANENT MUSEUM TO BE OPENED.

Consul-General Gottschalk further writes:

I have been asked by the Instituto de Higiene of Lima to make it known to American manufacturers of all kinds of sanitary goods that that institution proposes within a short time to open a permanent museum of hygiene, intended to educate the public here into knowledge of what modern science and industries have done toward public sanitation. Dr. M. O. Tamayo, the director of the institute, would be thankful for samples, printed matter, and any general information on these subjects which may be available from the United States. His address is: Dr. M. O. Tamayo, Director Instituto de Higiene, Lima.

The institute is prepared, to a limited extent, to pay freight on exhibits, but it might be well to submit the matter to its director before shipping, especially in the case of bulky articles. Among the lines in which the museum would be interested are the following:

Artificial foods, meat extracts, mechanical appliances (surgical), condensed milk, sanitary plumbing, disinfecting apparatus, sera, vaccines, articles of clothing (or textiles) of special hygienic interest, mineral and aerated waters, electro-therapeutic appliances, cuspidors, desiccators, school furniture, building material, portable houses for use in sanitary work, and baby foods.

The museum in question is a municipal institution which began to gain prominence some years ago under the Italian bacteriologist, Dr. Ugo Biffi, and it is directed by a corps of efficient medical men. It possesses well-equipped laboratories, both chemical and bacteriolog-

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ical, and is housed in a handsome building erected for this express purpose on the Paseo Colon, Lima's most fashionable promenade.

CONDENSED MILK.

Consul-General Gottschalk, of Callao, writes as follows:

It is proposed to open a factory for the making of condensed milk in the city of Lima shortly. The consumption of this article is very great here owing to the insufficiency of pasture land, and, as a consequence, of fresh milk in the neighborhood of Lima and its four suburbs. Messrs. Palacio & Hahn (whose address is Agencia Mercantil, Calle Aparicio 15, Lima) desire to be placed in relation with firms in the United States who manufacture machinery for making condensed milk, can-making machinery, colored labels, and knocked-down boxes for packing cans. It is suggested that the firms interested address these gentlemen directly.

FIREARMS AND GUNPOWDER.

Mr. Richard R. Neill, secretary of legation at Lima, reports, through the Department of State, that the Peruvian Government has issued a decree rescinding an order issued in June, 1901, restricting the importation of firearms. The decree follows:

First. That the importation of gunpowder, arms, gun cartridges, and those of pocket revolvers and their cartridges up to .32 caliber, as well as those of saloon rifles and their cartridges, may be made without the necessity of a Government permit, and in the Department of Loretto without the permission of the prefect.

Second. The charge of 1 sol which is paid to the Government treasury in Iquitos for the prefect's permit to import each firearm is hereby suppressed.

BRAZIL.

THE FLOUR TRADE.

THE FIELD CONTROLLED MAINLY BY ARGENTINA—THE SEVERAL COUNTRIES OF SUPPLY.

According to the Brazilian Review, a semiofficial organ, the importations of flour into Brazil during 1904 show a considerable increase both in quantity and value over 1902. The annexed table shows the imports of flour into Brazil in 1902 and 1904:

Country.	1902.		1904.		Increase (+) or decrease (−).	
	Barrels.	Value.	Barrels.	Value.	Barrels.	Value.
Argentina	418,818	$1,898,165	1,001,701	$4,590,115	+582,883	+$2,691,950
United States	526,846	2,735,408	337,740	2,180,808	−189,106	− 554,600
Austria-Hungary	86,255	526,804	102,788	641,750	+ 16,533	+ 114,946
Other countries	155,774	728,163	53,855	240,826	−101,919	− 487,337
Total	1,187,683	5,888,540	1,496,084	7,653,499	+308,391	+ 1,764,959

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As compared with 1902, the following statement shows the increase and decrease in the imports for the several countries in 1904:

Country.	Increase.		Decrease.	
	Barrels.	Value.	Barrels.	Value.
Argentina	582,883	$2,691,950		
United States			189,106	$554,600
Austria-Hungary	16,533	114,946		
All other countries			101,919	487,337
Total	599,416	2,806,946	291,025	1,041,937

The paper milreis in these computations is given as 24.47 cents, that being its average value in 1904, according to a report printed in Daily Consular Reports for June 28, 1905.

POSITION OF DIFFERENT COUNTRIES.

The percentage positions of the countries in the flour importations of Brazil in 1904 as compared with 1902 was as follows:

Country.	Per cent.
Argentina	+189.2
United States	− 36.1
Austria-Hungary	+ 19.1
Other countries	− 65.4
All countries	+ 25.9

By districts, American flour shows an increase only in district "a" (the Amazon and extreme north). In district "b" (Pernambuco) it has scarcely held its own; while in all the rest the falling off is such that American flour has practically disappeared from those markets. Meanwhile, Argentine flour has entirely monopolized the south, Rio and Santos, has driven the American article from Bahia and Victoria, and is already competing vigorously for the market of Pernambuco, where two years ago it was unknown, and has put in an appearance even on the Amazon.

The abandonment of the southern markets is explained sometimes by the failure last year of American crops and consequent shortage of flour for export. That, no doubt, led to the concentration of American shipments to ports, such as the Amazon and Pernambuco, where competition of Argentine flour would be less felt and the whole advantage of the rebate of 20 per cent on the duties might be realized. In the Amazon and extreme north their tactics seem to have been successful, and imports of American flour there show a positive increase of 23.6 per cent compared with 1902. In the Pernambuco district there is a slight decrease, whilst Argentine flour has there made a most successful onslaught and managed to secure 29.5 per cent of the total imported. Allowances must, however, be made for the fact that the rebate of 20 per cent did not rule throughout the year, but only for eight and a half months, from April 15 to December 31.

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FREIGHT RATES.

Estimating the paper milreis at 24.47 cents as the unit, the relative freight rates were as follows for a ton of 2,200 pounds in the country of origin, as shown by consular invoices:

Flour from—	Cost.			Freight and expenses.			Average for three years.	
	1902.	1903.	1904.	1902.	1903.	1904.	Cost.	Freight and expenses.
Argentina	191.7	172.6	194.2	16.557	17.3	16.3	186.2	16.766
United States	192.0	198.8	244.7	46.612	44.7	52.0	211.9	47.802
Austria-Hungary	237.7	226.4	250.2	42.982	40.8	36.7	238.1	40.196

The finest quality of flour imported into Brazil is Austro-Hungarian, the cost of which averaged, for the three years, 12.4 per cent higher than American and 27.8 per cent higher than the Argentine. It is used for special purposes, and its consumption tends to increase independent of prices or competition.

American flour comes next as to quality, the average cost for the three years being 13.8 per cent higher than that of Argentina.

The Argentine flour received here varies a good deal in price, as the following table for 1904 shows:

[Milreis, paper.]

	Argentine.	American.
Amazon	186.9	254.6
Pernambuco	208.3	230.7
Bahia and Victoria	203.5	227.5
Rio de Janeiro	182.9	298.3
Santos	205.2	214.0
South	192.0	254.1
Average	195.6	246.5

DUMPING FROM ARGENTINA.

Evidently a better class of Argentine flour is sent to the northern States, where competition with the United States is most formidable, whilst Rio and the extreme south serve as dumping grounds for anything that can find no sale elsewhere. Gradually, as Argentine milling increases, unless fresh foreign markets are found for her flours, dumping here must become more and more of a necessity. Against practices like this there is practically no defense except prohibition, and it is scarcely to be expected that this country will deliberately deny itself the advantage of cheap flour, without any sacrifice whatsoever of revenue, to please anyone. There can be little question that a great deal of the Argentine flour consumed here is sold at a loss, for which the millers compensate themselves by maintaining high prices in Argentina. Otherwise, with the heavy duties they are subject to, it would be practically impossible to compete with the local mills.

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ARGENTINA'S NATURAL ADVANTAGES.

The natural advantages of Argentina are, likewise, almost invincible. According to the statements in the consular invoices, freight and expenses to Brazil average in three years only 16.766 per ton for Argentine flour, as against 40.195 for Austro-Hungarian, and 47.802 for American. Why the freight and expenses should be so much higher from the United States we are not able to explain; but, en passant, may say that we have no very great confidence in the accuracy of declarations of "freight and expenses" contained in these invoices.

	Argentina.			United States.			Austria-Hungary.		
	1902.	1903.	1904.	1902.	1903.	1904.	1902.	1903.	1904.
Amazon, etc	40	.....	24	48	54	58	55	51	75
Recife	.....	26	21	49	38	44	42	40	35
Bahia and Victoria	19	27	28	40	39	39	42	39	38
Rio de Janeiro	14	14	11	44	38	67	39	41	39
Santos	15	16	14	46	38	45	34	40	44
South	19	1	19	38	.....	27	33	.....	.....

North of Pernambuco Brazilian markets may be regarded as a preserve that Americans should have no difficulty in retaining under normal circumstances. In the Pernambuco district matters are more serious, and it is on this, as it were, neutral ground that the struggle between Argentine and American flour will be fought out. South of Pernambuco the markets are practically an Argentine preserve that no fiscal drawbacks or anything short of prohibition will greatly disturb so long as Argentines are willing to dump flour there at a loss.

In 1901 the local millers produced 36.3 per cent of the total flour consumed. In 1902 the S. Paulo mills extended their business and local production rose to 49.9 per cent of the total, and again in 1903 to 50.2 per cent, but sank again, in consequence of the competition of Argentine flour, to only 46.7 per cent in 1904. A report of an American ex-vice-consul attributes the falling off of American imports of flour exclusively to the competition of mills, and particularly to the English mills, which, he says, make 20 per cent profit per annum.

It is clear that so long as Argentines dump their flour here at any price the local mills, too, will, in spite of all their advantages, be hard put to it to hold their own and that little or no advantage could accrue to the American article, even if the local mills stopped altogether, so long as such conditions exist. In point of fact, there is only one mill worked by English capital; the others all belong to Brazilian or Italian owners. The total milled by the English mills is only 50 per cent of the whole. There is no reason why, if they wish, Americans should not start mills here, too, and mill their own wheat, and thus share some of the "unearned increment."

INVESTMENTS.

WIDE OPERATIONS OF AMERICAN AND CANADIAN CAPITALISTS.

Consul-General Seeger, of Rio de Janeiro, Brazil, sends an account of the extensive operations of certain American and Canadian capitalists in South American street-railway and electric-lighting enterprises.

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One of the large operators, the Rio de Janeiro Tramway, Light, and Power Company, has acquired possession of a large number of the local tramway and lighting systems and has obtained thirty to fifty year franchises under which to carry out its monopolistic enterprises. Far-reaching plans have been made for the development of the properties in the hands of this company. It is well known that German capital, backed by the powerful influence of the German South American Bank, has already acquired huge investments, and represents a strong competitor of American capital, especially in Argentina and Brazil. It is especially gratifying, therefore, to note the expansion of American interests on such a large scale as is recorded by Consul-General Seeger. The report says:

The Rio de Janeiro Tramway, Light, and Power Company (Limited) was incorporated in the year 1904 in Canada, under the provisions of the Canadian companies act, the head office being in Toronto. The capitalization consists of $25,000,000 share capital and $25,000,000 debentures. The company was organized by a group of Canadian and American capitalists, most of whom are associated in similar enterprises in Canada and the United States, including the São Paulo Tramway, Light, and Power Company (Limited), the Mexican Light and Power Company (Limited), Trinidad Electric Company, Habana Electric Company, Toronto Railway Company, and the Montreal Railway, Light, Heat, and Power Companies, etc. William Mackenzie, Frederic Nicholls, and Sir William C. Van Horne, of Canada, F. S. Pearson, and W. L. Bull, of New York, are among the officers of the company.

DEVELOPMENT OF WATER POWER.

The purpose of the company includes the development of water powers and the utilization of same in the form of electric energy in Rio de Janeiro and other places. The company has already acquired two large waterfalls, one on the Parahyba River, a distance of about 80 miles from Rio de Janeiro, capable of producing about 100,000 horsepower; others on the Rio das Lages and streams in the vicinity, about 50 miles from Rio de Janeiro, capable of producing 40,000 horsepower. These latter the company is now developing, and expects to have power from same in Rio de Janeiro within six months, although probably two years will be required to complete the development. It is estimated by the company, after a careful canvass of the city, that there is a present demand for 25,000 horsepower. This, it is expected, will be considerably increased, as the advantages of the use of electric power become fully demonstrated.

ACQUISITION OF STREET RAILWAYS.

The company has acquired the "Carris Urbanos," "São Christovão," "Villa Isabel" street car companies, and has, it is understood, also a large interest in the "Carioca Company," which operates the electric line from the center of the city to Santa Thereza. These comprise all the street-car companies in Rio de Janeiro, besides the "Jardim Botanico" Company which operates in a separate zone. The Carris

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Urbanos and São Christovão Companies have animal traction. Prior to the acquisition of the Villa Izabel Company, a considerable part of which is still operated by animals, the electrification of the lines had been commenced, and several are now electrically operated. It is the intention of the new company to immediately commence the transformation of the whole system, which, it is expected, will be completed within two years. The Carris Urbanos, Villa Izabel, and São Christovão companies have now 125 miles of track; this will be increased in the transformation.

THIRTY TO FIFTY YEAR MONOPOLIES.

The concessions of these companies vary from thirty to fifty years, with monopoly of zone. The new company is applying for a new concession unifying all the existing ones. The company has also acquired the "Société Anonyme du Gaz de Rio de Janeiro," which, under its concession from the Federal Government, controls the illumination of the city until the year 1945. At present there is a small amount of electric lighting from steam plants operated by the company. The new company is applying for various modifications in the existing concession. The company has also a concession from the municipality of Rio de Janeiro, which included a monopoly for the distribution of electric energy for power purposes until the year 1915, after which date the concession continues for a long period without monopoly. The company has also recently acquired the property of the Rio Telephone Company, the business of which has heretofore been conducted by Siemens & Halske. The telephone concession includes a monopoly for a period of thirty years.

MANAGING PERSONNEL.

The general manager of the Rio de Janeiro Tramway, Light and Power Company (Limited), is Mr. F. A. Huntress, formerly general manager of the Worcester Consolidated Street Railway Company, of Worcester, Mass. Mr. James Mitchell, for many years the chief representative of the General Electric Company in Brazil, and more recently manager of the São Paulo Tramway, Light and Power Company (Limited), is chief engineer of construction. Mr. Mitchell is considered the leading electrician of Brazil. He and Mr. Huntress are citizens of Massachusetts. The legal representative of the company in Brazil is Mr. Alexander Mackenzie. The manner in which he has conquered the various formidable obstacles placed in the way of this important company augurs well for its future success.

CABINET WOODS.

According to Handel and Industrie Brazilian forests are furnishing a good field for the investment of foreign capital. Cabinet woods of many kinds abound, are easy to get at and fairly easy to get out. Only small quantities have been exported. This is due to a lack of enterprise on the part of Brazilians. A German consular officer, writing to his Government, points out the enormous possibilities of Brazil's forests and calls attention to the fact that an American company, with $5,000,000, is beginning to exploit some of the best regions. He assigns as a reason for the backward state of the lumber trade the fact

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that communication with the woods was bad, freights and wages high. The new company hopes to overcome all these by the application of modern transportation and milling methods. For example, an elevated swinging railroad will take the logs out of the woods to the mills and the mills will be near or on good roads.

EXPORTATION OF HIDES.

The annexed figures show the export of hides, dry and salted, from Rio Grande do Sul for the eight months ending August 31 of the years named:

Year.	Salted.	Dry.		Total.
	Europe.	Europe.	United States.	
1905	333,510	221,838	14,510	569,858
1904	467,642	184,792	29,136	681,570
1903	401,850	200,864	15,663	618,377
1902	355,980	144,987	60,564	561,531
1901	241,409	199,922	52,350	493,681
1900	215,131	69,321	70,639	355,091

No returns of salted hides are given for the United States.

COFFEE IN BULK.

Consul-General Seeger, of Rio de Janerio, reports that the firm of Arbuckle & Co., of New York, through their Victoria agency, has lately, for the first time in Brazil, shipped coffee in bulk, very much like wheat in the United States is shipped from the elevators into the lake steamers. The experiment was made in order to save freight and the expenses of sacks and to economize in the charges of lading, transferring, etc. The steamer *Dania*, which had 2,242,200 kilograms of this coffee on board, arrived in New York about the end of August, and the results were so satisfactory that another steamer with coffee in bulk is now en route for New York. This economy in the expenses of shipping ought to prove beneficial to the consumer.

CHILE.

PRESENCE OF PROSPERITY.

IMPORTANT ENTERPRISES PROMOTED LAST YEAR.

The principal features of the commercial year 1904 in Chile were the promotion of numerous new enterprises and the organization of many new companies and corporations. A list of the companies, with their capitalization, is shown by an extract taken from the annual report of Consul Mansfield, of Valparaiso, which is as follows:

The Alianza Company (Limited) (with power to establish agencies), exploit nitrate, iodine, etc.; capital, $2,500,000.

Explotadora de Chuquicamata, exploit mines; capital, $500,000.

Compañía de Gas de Curico, manufacture and supply gas; capital, $9,000.

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Teatro Curico, carry on theater-circus, Santo Domingo; capital, $23,000.

Compañía Agua Superari Tarapaca, manufacture and supply effervescent drinks; capital, $10,000.

Compañía de Gas de Chillan, manufacture and supply gas; capital, $66,000.

Compañía Salitrera Pampa Alta, exploit the nitrate of Pampa Alta; capital, $750,000.

Ferrocarril de Penco, exploit the railway from Concepcion to Penco; capital, $145,000.

Hipodromo, Chile, improve and propagate the breed of horses; capital, $7,000.

Tocopilla, fire and marine insurance business; capital, $33,000.

Portal Mac Clure, buy, rent, and sell properties; capital, $333,000.

Compañía Progreso Antofagasta, exploit nitrate territory; capital, $805,000.

R. Nitrate Company (Limited) (with power to establish agencies), exploit nitrate; capital, $1,000,000.

Sociedad La Cooperativa, mutual insurance against fire; capital, $333,000.

The Barrenechea Nit. (Limited) (establish agents), exploit nitrate territory; capital, $225,000.

El Credito Urbano, insurance against fire; capital, $750,000.

Tranvías del Resbalón, exploit the line between Santiago and Resbalon; capital, $300,000.

Compañía Cooperación de Construcciones, supply of articles of railway consumption more advantageous than in the town; capital, $50,000.

Compania Salitrera Alemana (establish agencies) acquisition and exportation of nitrate; capital, $3,000,000.

Chilena de Pesca, exploit the fishing industry of sea fishing of the Republic; capital, $75,000.

Porvenir de Collahuasi, exploit mines; capital, $183,000.

Esplotadora de Valle Simpson, exploit sheep industry; capital, $334,000.

Compania Chilena Lanas y Graserias, exploit the industries of sheep, agriculture, and commerce; capital, $500,000.

Agricola y Frigorifera de Cochamo, exploit the industries of sheep, agriculture, and commerce capital, $1,000,000.

El Zapallo de Quille, smelting of metals; capital, $14,000.

Criadero de Casemiro (Limited), sheep industry; capital, $150,000.

Compania de Minas El Orito, exploit mines; capital, $250,000.

Fabrica Nacional de Vidrios, manufacture of glass; capital, $333,000.

Banco Nacional, banking operations; capital, $3,400,000.

Compania Minera La Consecuencia de Santa Rosa, exploit mines; capital, $21,000.

Compania Esplotadora Cerro Palique, agriculture; capital, $216,000.

Minera Reivindicada Huantaca, exploit mines; capital, $7,000.

Terres et Domaines La Patagonia (establish agents), exploit the industries of agriculture, mines, and commerce; capital, $70,000.

Compania Salitrera Oriente, acquire and exploit nitrate; capital, $765,000.

La Riqueza de Magallanes, sheep industry; capital, $1,100,000.

Compania Esplotadora de Baker, sheep rearing; capital, $700,000.

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Ganadera Industrial de Bodudahue, exploit timber and buying and selling sheep; capital, $400,000.

Compania Minera de Cutter Cove, exploit minerals; capital, $150,000.

Compañía Chilena de Fuerza y Alumbrado Eléctrico, exploit electric lighting of Rancagua; capital, $50,000.

La América, exploit the nitrate fields of San Gregorio and America; capital, $800,000.

Compañía Minera Libertad de Santa Rosa, acquire and exploit the mines M. Cabellon and Libr.; capital, $34,000.

Explotadora Llanquihue, sheep and commerce; capital, $334,000.

Explotadora de Tecka, exploit the sheep industry; capital, $500,000.

Industrial de Rio Bueno, agriculture and mining industry; capital, $166,000.

Compañía Internacional de Mica, exploit mica; capital, $166,000.

Compañía de Gourock Export Company (establish agents), importation of merchandise; capital, $50,000.

Compañía Ascensores La Mariposa, construct and work lifts; capital, $20,000.

Sociedad Frigorífica Chilena, meat preserving and refrigerating factory; capital, $100,000.

Banco de la República, bank operations; capital, $4,600,000.

Compañía Estancia Santa Cruz, sheep industry; capital, $300,000.

Compañía Stuphen de Lavaderos de Oro (establish agencies), exploit the auriferous territory of Tierra del Fuego; capital, $334,000.

Compañía Salitrera Esmeralda, exploit the nitrate grounds of Felicidad and Esmeralda; capital, $1,000,000.

Compañía Gas Acetileno, manufacture of acetilene gas; capital, $3,500.

Explotadora de Minas de Magallanes, acquire and exploit mines; capital, $5,000.

Sociedad Ganadera de Laguna Blanca, sheep industry; capital, $50,000.

Compañía Comercial y Ganadera Chile y Argentina, cattle and sheep rearing; capital, $1,375,000.

Bolsa Mercantil, commercial business; capital, $1,600.

Compañía de Seguros contra Incendio La Cooperativa, insurance against fires; capital, $167,000.

Compañía Carbón de Cerro Verde, exploit coal mines; capital, $200,000.

Compañía Minera San Ramon de Freirina, exploit mines of copper; capital, $533,000.

Banco Union Comercial, banking operations; capital, $167,000.

Fabrica Nacional de Papel y Carton, manufacture of paper and cardboard; capital, $200,000.

Compañía Azucarera Internacional de Santiago, sugar refinery; capital, $666,000.

Compañía Salitrera Lastenia, exploit nitrate; capital, $1,800,000.

Sociedad Minera Hispano-Americana de Huiquentipa, exploit mines; capital, $167,000.

Sociedad Ganadera y Agricola de Huentelauquen, agricultural industry and commerce; capital, $334,000.

Tranvias San Pablo Barrancas, construct and exploit a tramway between Santiago and Resbalon; capital, $26,000.

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Sociedad de Pesca Juan Fernandez, exploit the fisheries of Juan Fernandez; capital, $220,000.

Sociedad Ganadera de Rio Bravo, sheep and cattle rearing; capital, $800,000.

Compañía Chilena Navegacion Vapor, maritime transport; capital, $250,000.

Sociedad Agricola Ganadera de Limai, sheep and cattle rearing; capital, $433,000.

Sociedad Industrial Velcho Palena, exploit sheep industry, agriculture, and commerce; capital, $1,000,000.

Compañía Esplotadora Tirua y Quidico, exploit sheep industry, agriculture, and commerce; capital, $882,000.

Sociedad Nacional de Ceramica, manufacture of drainage and water pipes, etc.; capital, $75,000.

Sociedad Agricola Ganadera de Rupanco, sheep and cattle rearing; capital, $667,000.

Copiapo Gold Mines (Limited), establish agents, exploit mines; capital, $375,000.

Montemar, modern seaside resort near Valparaiso, to be provided with hotels, gardens, gambling halls, and other appurtenances of a South American Monte Carlo; capital, $1,000,000.

GUATEMALA.

AMERICAN PRODUCTS IN DEMAND.

Vice and Deputy Consul-General Owen, in reply to inquiries addressed to him, writes as follows from Guatemala City:

The following dry goods of American manufacture are becoming quite popular here: Brown cotton, all grades; cotton duck, Lindale, up to 6 ounces; light domestics; long cloth; gingham; cotton drill, checks and stripes (cheviot); blue and brown cotton drill; fancy calicoes and lawns; cotton ware, all colors. The piece of 24 yards is the most popular, although cotton cheviots, gingham, etc., come put up in larger pieces. Dress patterns in lawn and calico are frequently imported.

It must be borne in mind that the importers of this Republic are for the greater part Germans, and their interest and inclination lead them to trade with the fatherland. England also is preferred over the United States, possibly because Guatemala merchants can more easily identify themselves in England and get better credits. American goods, therefore, are imported only when their quality places them so far ahead of the European article that the merchant is almost compelled to have them in stock. The American manufacturers should become better acquainted with this trade, ascertain who are worthy of credit, and extend it. The long voyage and delay en route compel the importer to ask long credits. It is sometimes two or three months after shipments destined for this city leave the manufacturer before they can be displayed in the store of the importer. The custom duty on about all cotton goods is collected on gross weight of the package. Great care should be taken with invoices for custom-house purposes; the goods must be described in exact phraseology of Guatemala custom tariff. Penalty for erroneous declaration is severe.

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EUROPE.

GERMAN EMPIRE.

TRADE WITH THE UNITED STATES.

COMMERCIAL RELATIONS ALLEGED TO BE UNSATISFACTORY—CONVINCING REPLY TO PROFESSOR WOLF.

Consul-General Guenther, of Frankfort, transmits a synopsis of a long article from the Frankfurter Zeitung, written by Mr. George Svendson in reply to a series of articles by Julius Wolf, professor of national economy at the University of Breslau, wherein the latter takes the ground that Germany's present commercial relations with the United States are most unsatisfactory; that since 1890 the imports into Germany from the United States have increased 540,000,000 marks ($128,520,000), while the exports from Germany to the United States during the same period have increased only 76,000,000 marks ($18,088,000). To the foregoing Mr. Svendson replies as follows:

In his eagerness to make his figures as overwhelming as possible, it is to be regretted that Professor Wolf omitted to state that, during the years mentioned in his article, the interoceanic German merchant marine has grown enormously; that American products come to us and that German products go to the United States in German vessels; and that, therefore, the freight charges on the American goods should be deducted from the value of imports from the United States and added to the value of German exports to the United States. The Professor is also silent about the many millions paid to our steamship companies by American passengers, and to the further fact that a large share of the imports of American products into Germany is merely in transit to other countries, especially cotton, copper, etc.

BALANCE OF TRADE.

That, at this late day, a professor of national economy lays stress upon the balance of trade is surprising. If we import annually cotton and cotton waste to the value of 346,000,000 marks and copper to the value of 120,000,000 marks, it is a sign of our great industrial development, and seeing that we can not produce these products, nearly one-half of which comes from the United States, we can not help but import them or see our industries break up. We import petroleum and lubricating oils from the United States to annual value of more than 70,000,000 marks, which we must import from foreign countries. Even our agriculturists would not be benefited were they deprived of the large amounts of phosphates, Indian corn, oil cakes, and agricultural machinery which we now import from the United States. How could Germany recoup her losses were her imports of American lard (70,600 tons, valued at 65,200,000 marks) shut out? Professor Wolf

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thinks we could buy it as well of some other country. However that may be, we now import 96 per cent of our total lard imports from the United States. The Professor is of the opinion that German products are more necessary to the American people than American products are to the German people.

NECESSITY FOR FOREIGN PRODUCTS.

This may be so in regard to potash salts, chloride of potash, and sulphate of potash, which we export to the United States to the value of over 94,000,000 marks, but in regard to our scientific instruments, optical and measuring apparatus, which the professors consider indispensable to the United States, they are of little account, for inclusive of surgical instruments and technical glass apparatus, the total exports to the United States are under 2,000,000 marks, and in case of a tariff war these could be procured in France and England or made in the United States.

HIDES AND SKINS.

Not much less vulnerable is the assertion of Professor Wolf that the United States can not get along without our hides and skins. Of skins the United States takes from us, almost exclusively calfskins, to the value of about 13,000,000 marks. In this regard we are equally dependent for our supply on foreign countries, for while our exports of skins are valued at 19,000,000 marks, our imports of skins are valued at 45,000,000 marks. The United States can buy its skins as well directly in France, Russia, or Austria-Hungary as we do, and the same could be done with cony skins, of which we furnished the United States 2,500,000 marks' worth last year. And now furs and fur skins: We import thereof on an average of 4,000 tons per year and export 2,400 tons, of which about 550 tons go to the United States; but the United States does not buy our home furs; these go to Russia. We improve and prepare furs in Germany, especially at Leipzig and vicinity, but this can be done also in other countries. It is therefore foolish to believe that the United States can not spare our furs. Of tar colors the United States imports annually about 21,000,000 marks' worth from Germany. Alizarin and anthracene are on the free list; other colors pay 30 per cent ad valorem. During a short tariff war the German industry would not suffer much, as before that a sufficient supply would be shipped, but during a longer one Switzerland would prove a strong competitor. Increased duties would finally lead to the establishment of factories in the United States by German or other manufacturers.

THE TRADE IN TOYS.

That the United States would buy toys from Germany to the value of $4,542,958 in 1904, during a tariff war, is not to be doubted; but for some time past the Austrian industry has made itself very much felt as a competitor in rubber balls, the Chinese and Japanese industry in carved toys, and so a tariff war would not be very profitable to our toy industry.

The foregoing articles—toys, chemicals, potash salts, hides, skins and furs, and scientific instruments—which the United States will have to buy from us, constitute, according to Professor Wolf, the largest

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part of our exports to that country. In reality they do not even form one-quarter the value thereof. Our textile industry, which alone exported 142,000,000 marks to the United States last year; the ceramic industry with 32,600,000 marks; fancy goods, with 28,400,000 marks; the glass industry, with 6,640,000 marks; the paper and printing industry with almost 35,000,000 marks; the leather industry, with 20,600,000 marks, exported per annum to the United States, and other industries evidently do not exist for Professor Wolf because they do not serve his purpose. That we can not dispense with American cotton he agrees to, as also with reference to phosphates, cotton-seed oil, turpentine oil, copper, and petroleum. As far as the two latter articles are concerned it is hardly necessary to assert as much. Germany can obtain copper also from other countries, as England, Chile, Japan, Spain, Australia, etc. The United States, however, would hardly be affected through closing of the German market to American copper, as it would then sell more to Great Britain, France, Belgium, etc.

THE PETROLEUM TRADE.

The United States, however, is very vulnerable as far as petroleum is concerned, for we are not dependent upon American petroleum. If the latter yet plays an important rôle in the German market it is for the reason that the German manufacturers of lamps produce for the home market burners with such small air conduits that Russian, Roumanian, and other kerosenes do not burn well therein. A tariff differentiation against American petroleum would result in an immediate change of burners. There exists an overproduction in petroleum, and if the American article is crowded out of the German market it will not easily find another, especially as the Austrian, Hungarian, and Russian are in fact closed to it through tariff legislation. The blow would be all the harder, as the American producers and refiners have invested an extraordinarily large capital in Germany in tanks and tank cars and in the whole organization for the sale of their product. This is the vulnerable point in the United States, only Professor Wolf does not know it, while the Americans are fully cognizant of it, and from this it can be hoped that they will be ready to come to an understanding; they are also aware that a tariff war would be very undesirable for both parties and would hurt the commercial interests of both.

MISLEADING STATISTICS.

A CRITICAL STUDY OF GERMANY'S TRADE RELATIONS.

Professor Wolf, as cited in the foregoing report, in arriving at conclusions as to the relative value of the trade of Germany with the United States from the gross value of American products imported into Germany, as compared with the gross value of German products exported from Germany to the United States, represents a large class of persons who deal in commercial statistics in this misleading way. In the commercial interchange between both countries, notwithstanding the large balance in favor of the United States ($105,592,438 in 1904), there is no country in Europe whose trade with the United

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States is as profitable thereto, intrinsically, as is the trade of Germany with the United States to the former country.

During the year ended June 30, 1904, the latest year for which detailed statistics are at hand, our exports to Germany amounted to $214,780,992, while our imports therefrom amounted to only $109,188,554. On this gross showing Professor Wolf proves, to his and to the satisfaction of German manufacturers and agriculturists at least, that this international exchange trade is overwhelmingly in favor of the United States, and goes so far as to say that if the case came to a "tariff war" Germany would not suffer to any extent, while (German manufactures being indispensable to the American people) the United States would be a great sufferer.

Mr. Svenson, in combating the views of Professor Wolf, has scarcely touched the analytical evidence whereby the relative value of German and American international trade can be shown.

Let us first deal with our exports to Germany and show its component parts, for this has more to do with its real value than any gross estimate can have. It need scarcely be said that trade made up of advanced manufactures is worth many times more to a country than that made up of raw materials, and that international trade assimilates or diverges in degree (value) as it has been subjected to advanced mechanical manipulation or left as it came from the fields and the mines.

RAW AND MANUFACTURED PRODUCTS COMPARED.

Taking the gross value of our exports to Germany in 1904, let us see to what extent raw products has entered thereinto, as compared with manufactured products. The annexed table shows the value of exports from the United States to Germany in 1904.

Articles.	Value.
ALIMENTARY ARTICLES.	
Breadstuffs:	
Indian corn	$7,151,579
Wheat	5,962,112
Flour	2,182,420
All other	918,380
Total breadstuffs	16,214,491
Fish	1,079,711
Fruit	3,639,277
Provisions:	
Bacon, salted pork, salted beef, etc	1,862,496
Lard	14,931,540
Oleomargarine	2,287,231
Tallow	613,651
All other provisions	1,787,304
Total provisions	21,482,222
All other alimentary articles	327,011
Total alimentary articles	42,872,712

Articles.	Value.
AMERICAN PRODUCTS NECESSARY TO GERMAN INDUSTRY.	
Cotton	$109,123,685
Cotton lintels	823,452
Cotton waste	900,904
Hides and skins	1,388,311
Copper	11,324,419
Rosin, tar, and turpentine	3,261,854
Mineral oil	9,055,761
Oil-seed cake	4,098,986
Tobacco	5,031,971
Wood	3,820,369
All other articles necessary to industry	2,530,278
Total articles necessary to industry	151,359,990
Total American exports to Germany of alimentary articles and articles necessary to German industry (raw products)	194,232,702

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Articles.	Value.
AMERICAN MANUFACTURES EXPORTED TO GERMANY.	
Apparel	$126,295
Books, pictures, paper, and stationery	438,018
Cotton manufactures	47,099
Chemicals, drugs, dyes, and medicine	637,150
Hardware and cutlery	647,109
Leather and manufactures of:	
Leather (splits, buff, grain, etc., chiefly)	826,590
Boots and shoes	352,019
All other manufactures	71,289
Total leather and manufactures	1,249,898
Machines and machinery:	
Agricultural machinery—	
Mowers and reapers	1,042,176
All other agricultural implements	536,850
Total agricultural machines and implements	1,579,026
Cash registers	528,808
Electric machinery	75,682
Laundry machinery	81,580
Metal-working machinery	886,785
Sewing machines	906,836
AMERICAN MANUFACTURES EXPORTED TO GERMANY—CON.	
Machines and machinery—Cont'd.	
Shoe machinery	$65,610
Typewriting machines	857,986
All other machines and machinery	823,576
Total machines and machinery	5,805,888
Metal manufactures (brass and brass manufactures chiefly)	773,689
Rubber goods	302,642
Scientific instruments and apparatus	507,773
Wood manufactures	672,897
All other manufactures specified	2,053,912
Total manufactures exported to Germany	13,262,280
Summary of exports from the United States to Germany:	
Alimentary articles	42,872,712
Articles necessary to German industry	151,359,990
Manufactured articles	13,262,280
Foreign products	2,413,848
Articles not specifically designated	4,872,162
Total exports to Germany	214,780,992

Before commenting on the foregoing statement showing the exports from the United States to Germany it is considered best to show the imports into the United States from Germany which can be classed under two heads, viz, "Raw products" and "Manufactured articles." The annexed table shows the value of imports into the United States from Germany during the fiscal year 1904:

Articles.	Value.
RAW PRODUCTS.	
Animals	$383,643
Beer	322,679
Bristles	867,000
Cement	1,213,905
Coffee	366,214
Hair, including hair manufactures	514,609
Hides, skins, and furs:	
Furs and fur skins	3,560,488
Hides and skins, other than fur skins	2,742,500
Hops	1,105,480
India rubber	1,720,434
Manures	2,454,000
Metals	807,543
Mineral waters	451,204
Oils: vegetable, volatile, etc	1,055,855
Rags, and other paper-making materials	731,801
Rice and rice flour	714,878
Seeds	1,012,405
Starch, etc	161,878
Sugar, refined	115,960
Tobacco	438,239
Vegetables	487,630
Wine	1,484,743
Wool	182,648
All other enumerated raw materials	4,584,364
Total German raw materials imported	27,490,100
MANUFACTURED ARTICLES.	
Books, stationery, etc	$540,502
Brooms and brushes	190,585
Buttons and button forms	260,624
Chemicals:	
Alizarine and alizarine colors	586,750
Coal-tar dyes and colors	3,789,755
Indigo (artificial)	682,230
Potash, muriate of	2,317,327
Quinine, sulphate of, etc	460,838
All other	7,939,533
Total chemicals	15,876,433
China and earthen ware	4,815,848
Clocks and watches	383,202
Cotton manufactures:	
Piece goods, bleached, dyed, colored, printed, etc	537,604
Clothing, ready-made	1,722,961
Knit goods, stockings, hose, underwear, etc	6,499,903
Laces, embroideries, lace curtains, ruchings, etc	4,545,545
Thread (not on spools), yarns, warps, etc	1,145,604
All others n. e. s	1,481,567
Total cotton manufactures	14,933,184

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Articles.	Value.
MANUFACTURED ARTICLES—cont'd.	
Glass manufactures	$1,461,077
Hardware, cutlery, and implements	1,406,522
India-rubber goods	536,763
Jewelry and plated ware	522,262
Leather and leather manufactures:	
Upper leather, dressed, and skins dressed and finished	1,186,808
Other leather	678,930
Gloves	2,004,959
Other leather manufactures	278,149
Total leather and leather manufactures	4,148,846
Linen goods	2,902,532
Machinery	680,699
Metal manufactures:	
Iron and steel	4,340,717
All other metal goods	2,433,243
Total metal goods	6,773,760
Musical instruments	954,910
Painters' colors	721,364
Paper and paper manufactures:	
Lithographs, labels, and prints	1,204,229
All other n. e. s.	1,986,861
Total paper and manufactures of	3,191,090
MANUFACTURED ARTICLES—cont'd.	
Silk manufactures:	
Clothing, ready-made	$814,840
Dress and piece goods	1,409,405
Velvets, plushes, etc	604,311
All other silk goods	3,207,920
Total silk manufactures	6,036,476
Toys	4,542,738
Wood manufactures	968,866
Wool manufactures:	
Clothing, ready-made	545,068
Cloths	1,075,757
Dress goods	1,135,880
Knit fabrics	333,666
All other	306,821
Total wool manufactures	3,396,692
All other manufactures enumerated	1,038,237
Total manufactured articles imported from Germany	76,666,617
SUMMARY OF IMPORTS FROM GERMANY.	
Raw materials	27,490,100
Manufactured articles	76,666,617
Articles not specifically enumerated	5,031,837
Total	109,188,554

PROFESSOR WOLF'S HOUSE OF CARDS.

The most cursory summary of the foregoing tables will show what a house of cards Professor Wolf has built to sustain the German contention—that in Germany's commercial relations with the United States the balance of trade is vastly in favor of the latter—a contention which has for some time been growing in volume if not in intensity, and has reached that point which threatens a "tariff war" unless the legislators of the United States rearrange matters more favorably for German manufacturers.

It is hard to believe that any large section of the German people can be misled by such arguments as those brought forward by Professor Wolf, and yet we must assume that when a learned "professor believes in these arguments others not so learned will be likely to fall in therewith, especially if his arguments coincide with their interests."

Had Professor Wolf analyzed the trade between the two countries with that degree of care that would be expected from a man of his prominence, he would have discovered that German trade with the United States is of far greater value to Germany than is the trade of that country to the United States—that is, the exports of each to the other. But the Professor, after the manner of too many learned men inexperienced in trade intricacies, accepted the gross mark value of German-American trade, viz, $214,000,000—more when entered

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through the German customs—of imports from the United States, and about one-half that sum of German exports to the United States, and jumped to the conclusion that the United States must be disciplined by a tariff war unless its legislators open our doors for German manufactured exports to balance the international exchange, mark for mark. It evidently did not occur to him that the intrinsic value of German exports to the United States already more than equalizes the balance of trade.

RAW COTTON IN THE EQUATION.

Of our exports to Germany more than one-half the total value is made up of raw cotton ($109,123,685). Deducting this one article from our exports reduces our total exports to Germany to less, in value, than our total imports therefrom. Bearing in mind that Germany must buy this cotton if she would keep her factories running—she can not buy her cotton supply elsewhere than from the United States—and that there is no other product exported from the United States upon which so little labor has been bestowed when it has entered the German ship for export to Germany, to give employment to the army of cotton operatives, it is not too much to say that this vast cotton export, when it emerges from her looms, is of more value to her than to the country where it was produced and whence it was exported instead of being transmuted in American mills to American manufactures.

Deducting all the raw products exported to Germany—say, $200,000,000—leaves for American manufactures exported to Germany—say, $14,780,992—which is really too liberal an estimate, as compared with, at the very least, $80,000,000 worth of German manufactures imported into and consumed in the United States, for some of the American manufactures exported to Germany may have been reexported from Germany to coterminous countries.

THE TARIFF WAR TALK.

Assuming that those people in Germany believe in the necessity of a tariff war "to reduce the United States to reason," it is hard to see, in case "the war is declared," how they could even inconvenience the people of the United States thereby. In the first place, the raw materials imported from Germany, $27,490,000 worth, are composed of products we could dispense with without the least inconvenience, while the $80,000,000 of manufactures now imported from Germany would be very speedily and graciously supplied by England, France, Belgium, etc. How would the "backwater" raised from the stoppage of this flood of manufactures affect the great cotton industry of Germany, already worked to overproduction?

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While the people of the United States desire no tariff war with any country and can not understand the cry therefor arising from German manufacturers and agriculturists, unless it is a "bluff" to wring concessions, they are fully aware of the fact that if pushed thereto they are self-supporting; they produce everything they need and could live in themselves though the world should be mad enough to build a tariff-war wall a mile high about them. What other great nation can say as much?

The talk of a tariff war to bring the United States to terms satisfactory to German manufacturers and agriculturists (which would shut us out of the German markets and open our markets to German manufactures), after the manner of Professor Wolf, is unworthy of the high intelligence of Germany, and only confuses the question at issue. The matter must be delegated to the representatives of both Governments, who, according to an unchangeable principle, will yield all that can be yielded after their own interests are fully conserved and protected.

COMMERCE OF THE EMPIRE.

LARGE INCREASE LAST YEAR—TRADE BALANCES—RELATIVE STATUS OF THE UNITED STATES.

Vice-Consul-General Mason, reporting on Germany's foreign commerce, notes a large increase for the year 1904. England has taken the place of the United States as the largest exporter to Germany. The balance of trade in 1904 amounted to $105,592,438 in favor of the United States, but the new German tariff, he believes, will curtail our export. The increased duties on food products will greatly enhance the cost of living and arouse still further opposition from the industrial and working classes. A notable decline in our wheat import to Germany is also recorded. Mr. Mason writes:

The official tables just published by the imperial bureau of statistics give the definite results of Germany's export and import trade during the year 1904. The exhibit of the whole foreign commerce of the Empire during the past five years is as follows:

Year.	Imports.	Exports.	Total.
1900	$1,438,234,000	$1,131,214,000	$2,569,448,000
1901	1,420,150,046	1,132,738,866	2,552,888,912
1902	1,381,780,400	1,145,446,400	2,527,226,800
1903	1,504,421,800	1,121,011,400	2,625,433,200
1904	1,633,703,100	1,265,065,200	2,898,768,600

There was a heavy increase in both imports and exports during the year, and the total increase of $273,335,400, in the aggregate, marks one of the most important chapters of development that has been recorded in any recent year. In respect to bulk, the imports of 1904

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aggregated 52,522,500 metric tons; the exports, 42,353,700, or a total of 94,876,200 tons, both being largely in excess of the totals of the last preceding year.

Ranged in the order of their importance, the 20 leading commodities of import and export in 1904 were as follows:

Imported.	Value.	Imported.	Value.
1. Cotton, raw	$112,098,000	12. Silk	$24,894,800
2. Wool, raw and carded	85,037,400	13. Coal	23,966,600
3. Wheat	66,878,000	14. Chili saltpeter	23,400,600
4. Gold, crude, bullion	52,026,800	15. Furs and stuffed birds	22,681,400
5. Coffee	39,070,200	16. Tobacco, raw	22,276,800
6. Barley	34,938,400	17. Iron ore	21,878,400
7. Copper	31,892,000	18. Horses	21,660,400
8. Cattle hides	31,844,400	19. Lard	20,896,400
9. Lumber and timber	27,560,400	20. Petroleum	19,349,400
10. Eggs	27,298,600	All other imports	898,578,600
11. Rubber	26,037,200		

The following table gives the value and percentage of 20 leading commodities exported from Germany in 1904:

Exported.	Value.	Exported.	Value.
1. Cotton manufactures	$80,182,200	12. Leather	$21,063,000
2. Iron manufactures	60,333,000	13. Engravings, etchings	18,540,200
3. Machinery	59,642,800	14. Furs, skins	18,230,800
4. Woolen goods	59,404,800	15. Woolen yarn	15,636,600
5. Coal	53,997,400	16. Playthings	15,255,800
6. Sugar	42,530,600	17. Porcelain	14,708,400
7. Silk goods	34,748,000	18. Coke	13,249,000
8. Gold and silver ware	24,253,200	19. Cotton	12,209,400
9. Clothes	23,709,800	20. Hops	10,829,000
10. Books and maps	21,896,000	All other exports	644,069,628
11. Aniline colors	21,086,800		

POSITION OF THE UNITED STATES.

The export from the United States to Germany during the year 1904 has shown a gain of only $95,000, and as there has been a material increase from Great Britain that country has outstripped Russia, whose trade has actually declined, and taken the place of the United States as the largest exporter to Germany. It should, however, be borne in mind that an important amount of the British exports to Germany have not been produced or even subjected to any process of manufacture in Great Britain, but after having been purchased by British merchants from the colonies or other foreign countries were exported to Germany.

IMPORTS INTO GERMANY.

In considering the export and import trade of the important commercial countries of Europe, due weight should be given to the fact that in some instances the country whence imports were exported, and not the actual country of origin, is indicated. This accounts for the fact that one of the important articles of export from Germany is cotton, in spite of the fact that not an ounce of cotton is grown in the country.

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The following table shows the relative importance of the import trade into Germany of all countries exceeding the $10,000,000 mark for the years 1903 and 1904:

Country.	1904.	1903.
Great Britain	$228,837,000	$198,373,000
United States	224,624,400	224,529,200
Russia	194,850,600	200,300,800
Austria-Hungary	174,144,600	179,642,400
France	98,816,800	82,776,400
Argentina	80,087,000	64,402,800
British India	70,186,200	67,568,200
Belgium	55,573,000	49,361,200
Netherlands	52,574,200	46,219,600
Italy	45,573,200	47,623,800
Switzerland	42,959,000	40,888,400
Brazil	37,294,600	31,439,800
Australia	34,153,000	28,560,000
Chile	26,846,400	22,776,600
Sweden	23,776,200	20,872,600
Dutch East Indies	23,633,400	21,967,400
Spain	23,633,400	20,872,600
Denmark	22,752,800	18,397,400
Roumania	15,327,200	15,089,200
Egypt	15,065,400	13,566,000
British West Africa	11,971,400	10,186,800
Turkey	10,353,000	8,948,800

EXPORTS BY COUNTRIES.

The United States is the third most important market for German goods, its imports from that country being something less than half of the amount imported by Great Britain and less than the Austrian imports by a little over twenty million dollars:

Country.	1904.	1903.
Great Britain	$236,833,800	$235,072,600
Austria-Hungary	139,087,200	126,282,800
United States	117,819,000	111,669,600
Netherlands	99,960,000	99,579,200
Switzerland	78,050,200	72,375,800
Russia	75,041,400	98,294,000
Belgium	66,021,200	63,787,000
France	65,283,400	64,881,200
Denmark	36,961,400	85,608,600
Sweden	35,938,000	31,487,400
Italy	34,748,000	32,391,800
Argentina	24,432,600	16,898,000
British India, Ceylon, and Malacca	22,824,200	21,396,200
Turkey	17,921,400	10,852,800
China	16,112,600	15,160,600
Norway	16,088,800	14,922,600
Japan	13,755,400	10,852,800
Brazil	13,470,800	12,352,200
Spain	13,351,800	13,851,600
Free port of Hamburg	13,161,400	20,087,200
Australia	11,495,400	10,662,400
Chile	10,638,600	10,305,400

INCREASED COST OF LIVING.

It is likely that the increased duties on food products will considerably increase the cost of living. Public opinion in Germany is sharply divided as to its advisability. The industrial and working classes are strongly opposed to, and the agrarian classes in favor of, the increase. Considerable discontent exists at present, owing to the high prices of

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meat incident to the exclusion of live stock and the difficulties encountered in importing meats. Drastic legislation for the purpose of protecting German live stock from contamination and of safeguarding the public health, which has been dictated by agrarian interests, has so reduced the importations of meat into Germany as to make it a luxury to the poorer working classes and to raise its price higher than that of any other European country. As considerable agitation for the moderation of the provisions of the meat-inspection law is being carried on, it is not unlikely that a favorable change may be effected.

THE LATEST RETURNS.

The latest official statistics for the six months of 1905 show that the aggregate imports were 25,271,614 metric tons, valued at $803,843,020, an increase of $63,829,620 over the imports of the first six months of 1904. The exports during the same period aggregated 18,546,979 metric tons, valued at $629,251,294, an increase of $43,747,494 over the exports of the first half of 1904. The annexed table shows quantites, in metric tons (2,204 pounds), of principal commodities imported from the United States into Germany in the first six months of 1904 and 1905:

Commodities.	1904.	1905.
Raw cotton	154,499	167,373
Cotton waste	7,155	6,464
Wheat	149,647	10,033
Rye	1,954	731
Oats	186	656
Corn	120,560	364,481
Raw tobacco and stems	5,578	4,952
Hides and skins	82	59
Meats of all kinds	2,301	4,790
Petroleum and products	371,762	346,683
Cotton-seed oil	9,374	4,122
Copper	47,107	44,656
Agricultural machinery	7,602	10,284
Machine tools	1,105	1,408
Fresh fruits	6,090	3,995
Dried and preserved fruits	26,375	18,097
Shoes	50	67

NOTABLE DECLINE IN WHEAT.

The decline in the amount of wheat exported to Germany in the first six months of 1905 is marked, as compared with those of similar periods during the preceding years. While the amount of wheat exported to this country from the United States has fallen off, partly on account of the high prices which prevail in America because our population is increasing faster than the wheat-growing area, the heavy and abrupt decline of last year was due largely to the deficient crop. It is to be hoped that with the fine harvest of this year wheat will again take its place among the most important articles of export from the United States to Germany. The imports of American corn are three times those of the corresponding period in 1904 and slightly superior to those of 1903. The amount of agricultural machinery imported has increased about 25 per cent. In view of the fact that during the two preceding years exports had decreased owing to home competition this is especially gratifying, as the intrinsic superiority of

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the American implements is responsible for the increase. According to statistics published in the Cologne Gazette the value of the American shoes imported into Germany during the first seven months of 1904 was $166,893, and the value of the shoes imported during the same period in the year 1905 was $230,149. The amount imported in July, 1905, was $43,802, while only $17,153 were imported during the corresponding month of 1901.

COLONIAL CONGRESS.

DISCUSSION OF CONDITIONS IN THE COLONIES.

Consul Ernest L. Harris, of Chemnitz, furnishes a report on the proceedings of the second colonial congress, which was held at Berlin in September. A number of questions were discussed by the delegates, who included every branch of the German Government, as well as missionary societies. This congress, it is said, furnished a correct picture of actual conditions in the colonies and the hopes and desires of the German people. The report follows:

The second German colonial congress was opened October 5, in the Reichstag building at Berlin, and continued in session for a period of three days. More than 500 delegates of the Government, army, navy, colonial department, and foreign missionary societies of both the Catholic and Protestant churches, in fact a representative body of all that is best in Germany, took part in the proceedings. More importance can be attached to this year's congress than the one preceding, for the reason that Germany is now passing through the most critical period of her colonial development. Much has been written of late regarding the German colonies, but in my judgment nothing has given such a true picture of the actual condition of affairs, and the hopes and desires of the German people in this respect, as the sentiments expressed at this congress. The object of this report is to give a general idea of the line of thought which was uppermost in the minds of the participants, for the reason that it will, in all probability, be made the basis of Germany's colonial policy for the next few years to come.

PRODUCTION OF RAW MATERIAL.

The German colonies are just entering upon the first stages of their development. The total commerce in 1903 only amounted to $15,946,000, or one-half of 1 per cent of the commerce of the German Empire. Colonies are an absolute necessity to the economic and commercial existence of Germany if she is to retain her position as a great nation. They must be made to assist in producing the raw materials necessary to feed the home factories. They must also eventually serve as a partial outlet or market for the articles manufactured from such raw materials, and to serve this end the tide of emigration from the mother country should, in the opinion of those present at the Congress, be turned as far as practicable toward such of the possessions as will admit of European settlement. Of all the products exported annually from the German colonies, there are $4,165,000 worth of plantation products, chiefly coffee, tobacco, and cocoa. It seemed to be

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the general opinion, based upon experimental results, that the German colonies in Africa were eventually destined to produce great quantities of cotton. The things most necessary to develop the growth of cotton in the colonies are railways and good roads of communication, as well as ways and means to combat cattle diseases. If cotton is to be grown in the furrow, oxen in those regions are indispensable to the plow. The opinion was further expressed that agricultural and cotton experiment stations should be established. In connection with such stations every possible effort should be exhausted to train up native labor to a high pitch of efficiency, and the negro population should be encouraged to throw off their inborn habits of laziness.

COLONIZATION AND EMIGRATION.

A paper was read before the Congress by a delegate calling attention to the favorable conditions of southern Brazil for German emigration. When it is not practicable for emigrants to seek new homes in the German possessions, efforts should be made to induce them to go to Brazil rather than to other countries. In that part of Brazil there are eleven German credit and savings banks. For the next ten years the outlook in Brazil will favor German commerce in general. Similar statements were made in regard to Argentina, which was declared to be a country with a great future.

The address of Professor Doctor Rathgen was important for the reason that it pointed out the dangers to Germany of the influence of immigration and how the trend of emigration had changed in recent years. Germany's position had been entirely reversed. She is no longer sending vast numbers of emigrants to foreign countries. One thing which was usually lost sight of, yet fraught with the greatest consequences in the future, was the fact that Germany had become a country which is receiving immigrants from neighboring states. Germany is becoming the home of foreigners to a far greater extent than England, and the day is at hand when the example of England and America must be followed. Steps must be taken to stem the high tide of emigration, which is beginning to endanger the vital national interests of the Fatherland. The character and quality of the emigrants have also changed. The emigrants of to-day in Europe who shift from one country to another are no longer the sturdy peasantry in search of new and permanent homes. They have been superseded by what can only properly be termed great bands of itinerant workmen. The causes of emigration have changed since former times. Political discontent, religious oppression, and the natural desire to wander are no longer the dominant motives which induce people to migrate. Emigration during the past ten years has been chiefly industrial in character.

SEA POWER AND CABLES.

There has been a tendency in Germany among the laboring classes to supercede the word "militarism" by the word "marinism," because the same efforts have been made in recent years to bring the navy, as far as efficiency is concerned, up to the same standard of perfection as the army. No such national movement, however, can be instituted and carried forward to success without reaching every class of the people with the much-dreaded tax list. Arguments were advanced at

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the congress to show the immense value of the construction of a navy where the money was voted and expended entirely within the country. Only the German working classes would be benefited by such a policy, and it would call forth the best efforts, ingenuity, and intelligence of skilled labor in every part of the Empire.

Technically there would be no difficulties in the way of laying cables to all the German colonial possessions. The obstacles are all of a financial nature. If the cables actually existed there would not be sufficient business done to pay contingent expenses. State ownership of such enterprises would not be practicable. The best means at hand, therefore, would be to connect with the already existing cables belonging to other nationalities.

CHAIR OF ORIENTAL LANGUAGES.

The last day of the congress was spent in treating with various subjects, such as explorations in the interior of some of the island colonies in the Pacific, the so-called Ethiopian movement among the negroes of Africa, the future of southwest Africa after the war, commercial conditions in Asia Minor, tropical diseases, and the importance of making a study of oriental culture as it exists in China and Japan. It was proposed that chairs of scientific Sinology should be established in the German universities for the purpose of teaching the present generation of young men something about the language, people, and customs of the Chinese Empire. There could surely be no danger in giving lectures which dealt with the importance and influence of Confucianism upon the jurisprudence and politics, as well as the science and civilization of a people which comprises one-fourth of the world's population. Doctor Franke in his address on this subject stated that the more Chinese and Japanese became acquainted with the culture and civilization of western nations the more firmly are they convinced of the intellectual superiority of their philosophy and methods of reasoning. Only a thorough knowledge of the peoplss of the East would henceforth prevent such surprises as took place at the outbreak of the great war just closed.

The German colonial congress this year was marked by a seriousness of purpose which shows how determined the German people are to seek the best solution of governing their colonies, and thereafter to put forth every effort to develop them into valuable assets of the Empire. The German colonial policy is not aggressive. To the contrary, the desire is prevalent everywhere to bring about law and order in the possessions already acquired. The German people in this regard wish for nothing more than what the skill of diplomacy and the achievements of peace will bring.

TEXTILE STRIKE.

GENERAL DISTRESS AMONG WORKMEN IN THURINGIA.

Consul Ernest L. Harris, of Chemnitz, sends an interesting report on the great struggle between organized labor and capital in the textile industry of Thuringia. In view of the immense quantities of German textiles annually imported into the United States the outcome

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of the struggle that is being waged in the industrial towns of Thuringia and Saxony is of the utmost importance to this country. German competition in the American textile market has been made possible largely because of the cheapness of German labor. The development of the American textile industry is annually increasing the difficulties of the German exporter in maintaining his foothold, and this embarrassment is undoubtedly reflected in the tremendous conflicts that have been constantly recurring of late years between the workmen and employers of the German textile factories, for it is of paramount importance to the German exporter to keep his price down, and the most effective way of doing so is to keep wages down.

In anticipation of the coming struggle both parties to the conflict began to organize several years ago. The local textile workers' unions established an organization embracing the entire Empire, while the factory owners in their turn, profiting by their narrow escape from defeat during the heartbreaking Crimmitzschau strike of 1903–4, organized also at the close of this strike and to-day act as a unit. That the outcome of the present struggle will be, as Consul Harris suggests, a defeat for the workmen there can hardly be a doubt. That eventually, as the result of successive defeats, increased emigration of the German working classes will follow may also be expected. In a struggle of this kind there is no quarter, and only one party to the conflict can get away. Mr. Harris presents the situation as follows:

The labor difficulties in the textile districts of Thuringia have not yet been definitely settled. The agreement reached between the workmen and their employers at Glauchau-Meerane on August 12 has not succeeded in dispelling the discontent which has prevailed ever since the great strike at Crimmitzschau during the winter of 1903–4. The weavers in the factories of Thuringia have always been in close touch with their fellow workmen in Saxony, and the dyers' strike at Glauchau-Meerane, which only lasted about three weeks, threatened at one time to involve the mills of Gera and Greiz, which would have thrown 40,000 men out of employment.

The Textile Union of Organized Labor has not let the matter rest. Discontent has been fostered anew, and at the present time a strike far greater in dimensions and consequences is threatening to afflict the already greatly distressed textile industries of Thuringia. The employers have issued a statement that they will make no further concessions. At a great joint mass meeting held at Gera a few days ago the skilled workmen and women employed in the factories of that city gave due notice, in reply, that if their demands were not complied with within a fortnight they would all go on strike. As a warning to their employers of the seriousness of their intentions, it was decided that the workmen in four weaving mills should immediately quit work. This means that a great and unprecedented strike in this part of the country has been practically declared, and it is up to the employers now to say the last word in the matter. The articles of compact agreed upon by the factory owners will permit but one answer, namely, the closing of all the mills in that particular

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branch of manufacture. This the strikers know full well, but it is unquestionably a part of their diplomacy to win public sympathy by placing their employers at a disadvantage when they take the very serious step of shutting down the factories.

ORGANIZATION OF EMPLOYERS.

During the past few years the factory owners in the textile districts of Saxony and Thuringia have gradually perfected an organization to protect their own interests against what they claim to be the ever increasing and unjust demands of their workmen. The pith and substance of the organization is to squelch the growing tendency of their employees to strike, and as far as possible to stifle the influence of organized labor and social agitators to stir up discontent and strife. Their radical method is to shut down all the mills throughout the country in order to protect a manufacturer who is threatened with a local strike. Such a policy, as might naturally be expected, has definitely established the line of demarcation, and the whole problem has been reduced to a trial of strength. The best demonstration of the practical workings of the great struggle between organized labor and the organized labor giver in Germany may be studied at present in the gigantic strike in the electrical works at Berlin.

HELPLESSNESS OF WORKMEN.

It is not difficult to foresee the immediate outcome of the impending strike in Thuringia, even if it assumes wide dimensions, and no matter how long it lasts. As in the case of Crimmitschau, the workmen will be compelled to return to the factories practically at the dictation of their employers, for the simple reason that the fund of their organization is limited, and a prolonged strike at the threshold of winter means that the doors of distress will be opened wide the moment that fund is exhausted. Organized labor in the textile industries of Saxony-Thuringia will always lose in a test of strength, but in the long run the organized labor giver will also lose, for the reason that, aside from the immediate wounds inflicted in a business way, an impassable chasm, growing wider and wider with each succeeding year, has opened up between these two mighty factors of industrial life. The laboring classes as a last resort will turn to that old method which has exerted such a powerful influence upon the world's history, namely, emigration.

THE BERLIN STRIKE.

REMARKABLE ACTION OF LABORERS IN CHEMNITZ.

In the following report Consul Harris, calls attention to the action of the Chemnitz workingmen in voting not to act as strike breakers in the great strike of the Berlin metal workers.

The strike in the electrical and metal works at Berlin, which threatened at one time to assume enormous proportions in which 120,000 men would have been thrown out of employment, has been peaceably adjusted, and the men have returned to work at what is practically their old rate of wages. It is difficult to say just what the influence of this strike, which only lasted about two weeks, would have been upon simi-

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lar industries in other cities of the Empire if it had developed into a gigantic test of strength between organized labor and the organized labor giver. It lasted long enough, however, to cast its influence as far as Chemnitz, and to cause the metal workers of this city to declare their position. Shortly before the strike came to an end about 1,000 skilled workmen of the Saxon Machine Factory, formerly Richard Hartmann, held a mass meeting, in which several resolutions were adopted. Sympathy was expressed for their fellow-workmen in Berlin, and instructions issued that no one from Chemnitz belonging to that branch of the organization should go to Berlin to play the part of a strike breaker. Moral and material support were also voted, in order to strengthen the hands of the strikers.

DANGER APPRECIATED.

It is the general impression that both sides, namely, workmen in manifold branches of industry and the various organizations connected therewith on the one hand, and the syndicates, unions, etc., of the capitalists on the other, were not yet ready to go to the extreme limit of perseverance. A full appreciation by both of the dangers attending such an experiment, in which the movement might spread to the provinces, as was well demonstrated in the attitude of the Chemnitz workmen, paved the way to a settlement for the time being at least. Whether this adjustment is but a temporarily patched-up truce, or whether it will become the basis of a permanent and definite understanding, working toward the best interests of everybody, the immediate future must tell. In no country in the world is the weal of commerce so dependent upon active industry in the shape of running mills and foundries as in Germany. Nowhere, not even in England, is the one so interwoven with the other and the vital interests of everybody concerned therewith so evenly balanced as here. In no other nation does the export and import trade go so evenly hand in hand as in this country. The raw materials are brought from afar in German ships, and it is the duty of the workmen in this Empire, through the application of consummate skill, to produce the highest quality of manufactured products therefrom. The general feeling of dread, therefore, on the part of everybody concerned, as to the ultimate consequences of prolonged strikes, and a further realization of the fact that there are always commercial rivals in other countries who are keen on the scent to take advantage of every opening, may have the effect of at least producing caution in the future.

AMICABLE ARRANGEMENT.

PEACEABLE ADJUSTMENT OF LABOR DIFFICULTIES.

Consul Liefeld, of Freiburg, Germany, reports an arrangement entered into by laborers (glaziers) on one side and employers on the other. It deals with time, wages, etc. He writes:

As a result of a recent misunderstanding between employers and employees in the glazier trade in this city a new contract was agreed upon, from which the following points are taken:

The time of labor shall be nine and one-half hours per day—in the forenoon from 7 till 12, and in the afternoon from 1.30 to 6.

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The wages per hour shall be 10 per cent more than the present rates.

The pay shall be given every Friday and not later than 6 o'clock.

On the days before New Year, Easter, Whitsuntide, and Christmas labor shall cease at 4 o'clock instead of at 6 o'clock, without loss of wages.

Only in urgent cases must work be done in extra hours, at nighttime, on Sundays, or on legal holidays. The two hours immediately following the regular day hours shall, if used for overwork, be paid with 25 per cent extra, and nighttime, i. e., until 5 in the morning, as well as Sunday and holiday work, shall receive 50 per cent extra wages.

For work out of town, if only one day is required, an extra wage of 1.50 marks (36 cents) shall be paid as well as the traveling expenses, but if it is required to stay overnight, then instead of the 1.50 marks (36 cents) extra the employer must provide for board and lodging in a respectable lodging house. In case of work in the suburbs of the city dinners must be provided. The traveling time is to be considered as work time.

For work in new buildings, if it last a day or more, there shall be paid 1¼ cents per hour extra.

During the first week after being engaged as a workman no notification to quit shall be given or required; but after the first week a one week's notice must be given and required.

For the settlement of any difficulties which may arise there shall be a committee of two employers and two employees, and if these can not succeed in bringing about a reconciliation the trade tribunal shall intervene.

The employment of the workmen shall be, if possible, through the Freiburg employment bureau of the glaziers of Germany.

This agreement shall be in force from October 1, 1905, until July 1, 1907, and thereafter always for one year unless by the 1st of June of any year notification of intention not to be bound be given by either party. Wage agitation or the celebration of May 1 may not be made causes for disciplining laborers.

PROTECTION OF WORKMEN.

GUARDING MILL EMPLOYEES AGAINST INFECTION.

From the Disdakalia, of Frankfort, Germany, Consul-General Guenther takes the following:

Workmen in woolen mills are threatened with a disease, which though not now very frequent, still requires constant attention. It is mortification or fatal inflammation of the spleen (milzbrand), which originally is found in animals but can also be transferred to man. With animals it is incurable and with human beings frequently fatal. The disease is very frequent among the sheep herds of Russia and Turkey, India, China, and those of other countries. There is danger that the bacillus of the disease may be brought in from abroad with the hides, or with the wool only, which is all the more probable as no outward sign can be noticed, and such infected wool is often packed with healthy wool. Special precaution is therefore necessary in opening the bales.

The wool of the Angora or cashmere goat, the lama, the alpaca, and the camel should only be unpacked over a ventilator which creates

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a draft into a compartment where workmen do not get. The most dangerous kinds of wool are the Persian and the wool of the Angora goat of Asia Minor (mohair), which before unpacking should be immersed in water and disinfected by steam.

It has now been legislated in England that the room in which cotton is sorted must have at least 1,000 cubic feet of air for each workman, and that the resulting dust must also be drawn off by a ventilator.

CHEMNITZ INDUSTRIES.

COTTON AND HOSIERY—AMERICAN PRODUCTS.

Consul Harris quotes an excellent report on the trade conditions of Chemnitz by the British vice-consul stationed at that place. He writes:

The annual report of the British vice-consul at Chemnitz, which recently appeared, is interesting and instructive in many ways. The vice-consul, who, apart from being a British official, is general manager of the Nottingham Manufacturing Company, one of the largest hosiery concerns in Chemnitz, is in a position to speak with authority in regard to business conditions in Saxony, because his long residence in the country and business experience as well have, generally speaking, given him a deep insight into many phases of German commercial and industrial life. Of Chemnitz industries the vice-consul says:

"In regard to individual industries, wool-spinning mills were kept well employed throughout the year and the prices realized remained firm, with an upward tendency in the latter half of the year. Profits have, however, in many cases not been satisfactory, for it seems that many spinners expected raw wool to get cheaper and finally had to pay more for the staple than they had calculated. The situation has been especially difficult for mills with combing plants, as the combed material was often offered relatively cheaper than the figures for which the raw wool had been purchased.

"Cotton spinners were fortunately very well employed, or the scarcity of cotton in the second half of the year would have proved disastrous. When the fall came in America most mills had sold their production up to the end of the year, and could therefore maintain prices for the old crop, and only made lower quotations for deliveries in the new year, spun from the new crop. Consequently the results of the year have not proved unsatisfactory, but the prospects for the present year are not, so far, very good, as some mills purchased cotton before the lowest point was reached. The production of Lisle thread in this district has been very considerably increased. An extended demand for goods manufactured of mercerized Lisles has helped to absorb the production easily.

THE HOSIERY TRADE.

"The conditions in the hosiery industry have steadily developed. The increased production has been fairly disposed of, with temporary lulls, which have kept prices down to the lowest level; and, naturally, the condition of the cotton market has not been in favor of the situation. The receptivity of the American market for very light gauze Lisle hose, almost like cobweb, has entirely changed manufacturing

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methods, much finer counts than formerly being used on the machines. Lace hose, which were in such a critical predicament last year, have entirely recovered, and at the present time the demand far exceeds the supply. Considerable orders for new machinery to make this class of merchandise are now keeping machine shops busy. Among fancy styles, hand-embroidered goods have been in excessive demand. No machine has yet been invented that will advantageously supplant hand labor for this purpose.

"Generally speaking, rather better conditions prevailed in the machinery trade than during last year, though they differed widely in various departments. Machine tools and locomotives seemed to give promise of a good demand at the commencement of the year, which, however, was not fulfilled; as regards the latter, this was due to the great care displayed by the Saxon railway authorities in placing orders. The large locomotive works here have seriously considered the question of giving up building locomotives, but have so far come to no conclusion. In other departments of machine building there was considerable prosperity, some declaring dividends of 18, 20, and even 24 per cent."

In regard to the market for British-made goods in this city, the vice consul further says: "British-made goods of various kinds could be more extensively sold in Germany if proper methods were adopted for introducing them. The obvious way would be to offer them direct to the public. For instance, large manufacturers of boots, kid gloves, and other kindred goods should jointly open shops in a prominent locality of the larger cities. Sending out British catalogues to wholesale houses is productive of very small results."

DIFFERENCE OF OPINION.

I can not agree with the vice-consul in this statement. As a general rule, where English manufactured articles can be sold American goods will also find a market. In my judgment British boots will have absolutely no show in this market alongside of American shoes. The inroad which American shoes are making in the United Kingdom, not to speak of Germany, will bear me out in this statement. Judging from reports, the English-made shoe is no better than the German one, at least not better than what is produced in some parts of Austria. The outlook for British gloves in this market can not be said to be bright. Germany to-day is making as nice and elegant a kid glove as is produced anywhere. For example, in the little town of Johanngeorgenstadt, down on the Bohemian frontier, not far from Karlsbad, kid gloves are being made which will rival those of Grenoble. Invoices covering about $5,600,000 worth are certified at Eibenstock every year for shipment to the United States. It is unlikely that in the long run British kid gloves would make much headway against home competition. The vice-consul further says:

"Preserved fruits and marmalade are expensive luxuries in Germany, the latter being practically unknown. If makers would take steps to place them directly before the public they might become as popular as in the United Kingdom."

This statement I can readily indorse, and it would apply particularly to the American product in this respect. The outlook for American fruits, jams, etc., is as bright as ever.

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JAPANESE TRADE.

COMPETITION GROWING BETWEEN THE WEST AND EAST.

In a report on the commercial contest that seems inevitable between Germany and Japan, Consul Harris calls attention to the fact that Germany has been required to take third place in eastern waters since the close of the war between Japan and Russia. He points to the significant fact that while Germany pays the North German Lloyd $595,000 a year to back up that line's efforts to maintain its position in the East, the Japanese Government pays a Japanese line $2,975,000 a year to assist in developing ocean, coast, and river traffic in China. He writes:

Thus far German shipping on the Yangtze and the coast trade of the Shantung Province has held second place. In fact, German commerce generally throughout China was making rapid strides toward ousting England from the first place. The advent of the Japanese upon the scene has changed all this and reduced Germany to third place. The cause of this is to be found in the fact that the Japanese, to begin with, work for less wages than the seamen of other nations, thus enabling the young and flourishing merchant marine of Japan to offer cheaper freight rates. Again, the Japanese plan of assisting her merchant marine by liberal subsidies is having a wholesome influence upon the development of the nation's maritime trade. The North German Lloyd's line to China and Japan receives a subsidy of $595,000 annually. The Nippon-Jusen-Kaisha receives $2,975,000 a year to assist in developing ocean, coast, and river traffic in Chinese waters. The fact that the Hamburg-American Line has recently established new lines to the Far East, among which is one to Chemulpo, would indicate that Germany intends to put forth every effort to retain the trade already secured in that part of the world. Whether or not Germany will be able to make any headway commercially against the rising maritime power of Japan is a question which seems somewhat doubtful.

CATTLE RAISING.

THE PROBLEM OF SUPPLYING THE DEMAND FOR MEAT.

Consul H. W. Harris, of Mannheim, sends a suggestive article on the economic methods employed in the German Empire in raising a large number of cattle and other live stock on a very small area. While the meat supply is running short, a much greater shortage would prevail were it not for this fact. "Scrub" stock is scarce, as are also the fancy breeds, the Germans aiming to raise a fair general-average stock for dairy and meat production. His report follows:

One aspect of the present widespread agitation of the meat question in Germany deserves more than passing notice. It is the extent to which Germany in recent years has, in spite of her somewhat limited area and a naturally poor soil, been able to supply her large population with meat. While it is certainly true that the supply has been

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insufficient and has given rise to an unmistakable demand for a more liberal policy in the admission of foreign meats, practically all the cattle and hogs used for meats in Germany are raised within the Empire. While England, with a meat consumption reckoned at 112 pounds per capita annually, as against 92 pounds per capita in Germany, imports about 60 per cent of her meat supply, Germany's importations in recent years have been comparatively insignificant. Thus, with a population of perhaps quite 60,000,000 people, the importation of live stock for slaughtering purposes during the first six months of the current year included 177,494 cattle, 35,755 hogs, and 694 sheep. To the traveler passing through Germany, who rarely sees swine at all and, except in rare cases, never sees live stock of any kind on pasture, it would seem incredible that such large quantities of cattle, hogs, and sheep are produced.

STUDY OF THE BEEF QUESTION.

The fact seems the more remarkable in a country where practically the entire population live in cities and towns, where large tracts of forest lands exist, and the raising of sugar beets, wine growing, and gardening are industries of great importance. The explanation is doubtless to be found in the special attention given to stock breeding in Germany and to economy in feeding. In all parts of the Empire breeders' associations are giving care and attention to the selection of stock, and especially for meat-producing purposes, such as is probably rarely found in the United States, except in limited areas. Live stock, and especially cattle and hogs, form by far the finest exhibits at the large national agricultural fair which is held each year at some one of the leading German cities. The entries of cattle run far into the hundreds, and while not preeminent in the breeds best known for dairy purposes, they show how thoroughly the question of beef cattle is being studied, or, perhaps more correctly stated, of cattle suited for both dairy purposes and for meat production. In the exhibits of swine, and to a lesser degree in those of sheep, care in breeding is shown. The maintenance of a fairly high general average among cattle is rather to be noted than the breeding of fancy herds here and there, though such herds are to be seen at fairs, and are frequently to be found on the larger stock farms. Wholly inferior stock—the so-called "scrub" stock frequently seen in fairly good farming localities in the United States—is probably rare in Germany. The high price of land, the cost of feed, and the high prices of all kinds of meat have had a direct influence on the selection of live stock and on the stock-raising industry.

METHOD OF FEEDING.

The fact that nearly all live stock in Germany is raised and fattened for market in the villages certainly makes the meat produced inferior in quality to that from well-selected live stock pastured through the summer and fattened on grain in the fall and winter; but the German method of feeding, including the use of large quantities of green feed, root crops, etc., makes it possible to keep a much larger amount of live stock on the same amount and quality of land than is probably kept in other countries. Small tracts of land which would support

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but a few animals, or possibly but one animal, if allowed to roam on pasture and to be tortured by flies, are made to sustain considerable amounts of live stock by this economy in feeding. The economic and scientific manuring of the farm lands keeps them in a high state of productiveness. From the nature of the case, stock raising on a thickly settled area, much less than that of the single State of Texas, can never be reckoned as a great industry in the sense in which it is carried on in the United States. The point here made is that in this industry, as in many others, the German characteristic to make the best of his opportunities is clearly to be seen. That this is a dominant trait of the German character is evidenced by the many channels of industry into which he has entered with marked success.

BREEDING ASSOCIATIONS.

Reference has been made above to breeding associations. Figures are not at hand showing the number of these associations throughout the Empire. In the Grand Duchy of Baden, of which Mannheim is the commercial center, a State about the size of Connecticut, broken by the extensive forest regions of the Black Forest and Odenwald—a distinctly manufacturing State, with gardening, wine growing, and sugar beets occupying much of the best land—there were, according to the latest available statistics, upward of 30 cattle breeders' associations, with a membership of more than 7,000, besides associations for the breeding of swine, goats, poultry, etc. It is probable that other provinces of the Empire would show a still larger relative number of such associations.

CHEMICAL INDUSTRY.

HIGHLY PROSPEROUS AND PROFITABLE.

Consul H. W. Harris further reports that at the annual meeting of the German Association for the Advancement of the Chemical Industry special emphasis was placed on the prosperous conditions existing in this trade. The dividends of 143 stock companies, representing a capital of $157,913,000, average 9.37 per cent in 1904 as against 8.56 per cent in 1903. He says:

The annual meeting of the German Association for the Advancement of the Chemical Industry was held at Heidelberg, in this consular district, on September 23 and 24, 1905. The discussions covered a somewhat wide range, and included a survey of the present condition of chemical industry in Germany; the probable effects of the new commercial treaties made by Germany upon this industry and the importance to this branch of manufacture of satisfactory trade relations with the United States and other countries. As is generally known, chemical manufacture in its various branches is justly regarded as perhaps the pet industry of the Empire. In no other single industry has Germany done so much valuable pioneer work as in this one. In none other has the value of her technical schools been so fully recognized as in this one. No other industry has been so little affected by the business depression of the past four years as the chemical industry.

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GENERAL IMPROVEMENT IN CONDITIONS.

In the report of Director Wenzel, of Berlin, general secretary of the association, the general improvement in the industrial conditions of Germany as evidenced by increased railway earnings, exports, and coal consumption, etc., was noted. He stated that the number of workmen employed in factories has increased about 6 per cent over last year, and wages 7½ per cent; that the increase of employees in the chemical industry has been somewhat above 5 per cent. The profits in this branch of manufacture were stated as showing substantial gains over last year, notwithstanding a general rise in the cost of raw materials. One hundred and forty-three stock companies engaged in chemical manufacture, with a total capital employed of about $157,913,000, show average dividends for their last fiscal years of 9.37 per cent, as against 8.56 per cent for the previous fiscal year. Taking 1899 as the most favorable year in the industry, and representing the profitableness of that year as 100, Director Wenzel stated the succeeding years might be represented by the following figures: 1899 at 100, 1900 at 91.2, 1901 at 90.8, 1902 at 87.8, 1903 at 93.3, 1904 at 93.3, and 1905 at 97.

Among the branches of the chemical industry showing the largest dividends are coal-tar colors, commercial fertilizers, and explosives.

DISINFECTED BARBER SHOPS.

STRINGENT GOVERNMENTAL HYGIENIC REGULATIONS.

The following report comes from Consul-General Guenther, of Frankfort:

In late years the hygienic requirements with reference to barber shops have been greatly increased and it seems that they are constantly becoming more severe. So far the authorities had restricted the regulations to the utensils, but lately the personal cleanliness of the barber has also been made the subject of municipal legislation in Germany. Recently the following rules have been established by the municipal government of a larger German city:

The cut-off hair must at once be removed; the floor of the shop must be washed at least twice per week; cold and hot running water must be supplied, and the barber must wash his hands with warm water before attending to a customer. No cretonne or carpets are permitted in barber shops. The head rests must be covered for each customer with a fresh napkin of paper or linen. The employees must wear clean, long upper garments of light color, without pockets. The soap used must be in form of powder or small tablets.

The lather from razors must be removed by means of paper. Instead of sponges pieces of woolen cloth or napkins have to be used. Alum or magnesia can only be used, kept in a powder box. The bowls and shaving brushes must be cleaned each time after having been used. Nobody is allowed to be shaved suffering from a visible skin disease, unless the proprietor of the barber shop is convinced that it is not contagious. Sponges, powder puffs, magnesia and styptics in lumps, and revolving brushes are prohibited. Scissors, brushes, and combs, as well as the hair-cutting machines and razors must be cleaned with ammonia or soda and an antiseptic solution. As antiseptics cylline, izal, and chinosol are recommended.

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DANGER OF FLANNELETTE.

The "Didaskalia," of Frankfort, Germany, forwarded by Consul-General Guenther, is of the opinion that it is time to prohibit the sale of that dangerous fabric which is now sold in England in large quantities under the name of "flannelette." Flannelette possesses the quality to catch fire very easily, which is all the more dangerous, as the stuff is a favorite for making shirts for children.

"The Lancet" deems it necessary to again call attention to the numerous victims which this fabric has already made among children, especially among the poorer classes, because they of course will buy a cheap article more readily, and because the mother can not always look closely after her children. Recently several accidents have been reported, the details of which are almost always the same. A little child is left in the kitchen while the mother puts the baby to bed. The child gets near the cooking stove and the flannelette nightshirt catches fire. The usual result is death of the child. The English judge who had to examine into these cases stated that all the parents who wanted to get rid of their children had to do was to clothe them in flannelette shirts and then leave them alone in the kitchen with a burning stove.

BIG WIRELESS PLANT.

A STATION TO COVER NEARLY ALL OF EUROPE.

Consul Diederich, of Bremen, furnishes a brief description of a new wireless telegraph station to be erected at Norddeich by the German Government. Mr. Diederich writes:

The general post-office department of the German Imperial Government is now building a wireless telegraph station of monstrous height at Norddeich, which probably will be for the time being the most efficient in the world. It is expected to cover a circuit of not less than 932 miles. This station will convey not only messages to and from Germany, Switzerland, France, Great Britain, and Denmark, but also the larger part of Italy, Sweden, and Norway, and even portions of Spain, the Balkan peninsula, and Russia; to the southeast it will operate as far as Saragossa, in the south it will almost reach Naples and Cetinje, in the east get close to St. Petersburg, and in the north it will talk to the people at Drontheim and about halfway up to Narvik. German vessels homeward bound from America will be able to communicate with the German station at Norddeich when they are still on the Atlantic far beyond Land's End, 12° west of Greenwich. The installation at the station will be set up by a Berlin firm supplying machinery, apparatus, and accessories for wireless telegraphy, according to the system called "telefunken."

At first it was proposed to erect this gigantic telegraph station on the island of Borkum, but finally Norddeich at Norden was chosen as the northwesternmost corner of the German Empire. Norddeich is also the terminus of the Prussian railway system in the extreme northwest, and a small seaport for the Frisian Islands. The towers for the station are to be 213.25 feet high. The foundations have already been laid and the work of erecting the iron superstructure will soon begin. I

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am informed that the entire plant, including dwellings for the officials and employees, will be completed during the month of November, and that by the beginning of the next year this latest and largest telegraph station will be ready for performing its work.

UNITED KINGDOM.

ENGLAND.

BRICK-MAKING MACHINES—A CHANCE FOR AMERICANS.

Consul Williams, of Cardiff, reports a good chance for American manufacturers of brickmaking machines to get into the British market. New laws regarding buildings will require the reconstruction of many old buildings of brick, and all new buildings must be of brick or stone. He writes:

Brickmaking promises to be a profitable industry in Britain during the present century. Existing conditions will make it necessary to rebuild fully one-half of the houses now standing, for the housing movement, which is gaining momentum rapidly, demands more modern and better houses both in congested centers and in rural districts. At the same time the growth of industrial towns and the development of new coal fields will require many other new houses, while the development of industries and the growth of towns will create an additional demand for fire and paving brick. The building by-laws now require that practically all new houses must be built of brick or stone. These by-laws, while promoting sanitary conditions and greatly reducing fire losses, have handicapped the building trades by making building very expensive. They have also affected brickmaking, for the brick men, secure in their trade, have remained unprogressive until recently, following the old-fashioned methods and retaining the out-of-date machinery.

PRESENT BUILDING SYSTEM EXPENSIVE.

But one phase of the housing movement is introducing a change. Its promoters have discovered that existing by-laws make the present system "the most expensive way of building devised by man," and they are trying to secure modifications of the by-laws to allow of the use of wood, iron, and concrete, instead of brick and stone. Their effort has awakened the brickmakers, and they are beginning to introduce modern methods and machinery in order to reduce the cost of brickmaking. This change opens the door of opportunity for American manufacturers. Until recently the largest brickmaking machines used had a capacity of less than 20,000 bricks per working day, and many large manufacturers were satisfied to use even the smallest machines as long as they held together, but the change referred to has created a demand for machines with larger outputs. As a result of this, certain firms at Nuneaton, Leeds, Acrington, and other towns are turning out brick presses with a capacity of 10,000 to 25,000, and tile presses with an output of 50,000 or more per day of ten hours.

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DEMAND FOR MEDIUM-PRICED MACHINES.

There is a great number of small brickyards in Britain, and medium-priced machinery with a comparatively high output is in demand. These machines, like all others seeking a British market, must be of a high quality, for the Englishman expects a maximum of service from his machinery, and no bargains are ever found in his scrap pile. This is only one of the many local conditions that must be thoroughly learned by Americans. It is essential to study the British point of view. This is best stated in the trade journals, many of which publish directories of the firms engaged in their particular trade. This is true of the Brick and Pottery Trades Journal, 29 Basinghall street, London, $1.20 per annum.

American manufacturers can not reasonably expect to introduce high-priced machinery in Britain by correspondence. To win confidence and recognition they must first establish headquarters here. The representatives employed should always be men of the highest type in their class, but after all is done it will be found that the machine itself in operation will be the best salesman. The Englishman is seldom convinced of the advantage of making a change until he has convinced himself. Lastly, American salesmen looking for immediate results will be disappointed. A permanent market can be won only slowly and with much initial effort and expenditure.

BARRIERS CREATED BY AMERICAN MANUFACTURERS.

Consul Halstead, of Birmingham, furnishes a report in which he describes obstacles that are created by manufacturers and merchants in this country to efforts that are made by merchants in England to place orders. The consul's report is based on a statement made to him by a Birmingham merchant, who subsequently expressed his views in writing on this subject. The merchant declared that his firm had recently been trying to extend their operations in this country, and that overtures to that end had been met by many American manufacturers in a manner that was not at all encouraging, and in a few cases bordered on discourtesy. The firm, it is explained, has established satisfactory relations with a number of United States manufacturers, but when it is desired to take up a new article, difficulties are likely to arise. The consul quotes the Birmingham merchant as follows:

The vast majority do not seem to have any understanding for the exigencies of the export trade at all and seem particularly to be quite incapable of comprehending that terms which may be quite logical between two firms in the same city are unworkable under the altered circumstances. Either they refuse to do business at all or they present terms which are unacceptable. Some of them wish to attach sight draft to the bill of lading, which means a heavy loss in exchange, apart from the fact that we, in common with many firms of standing in this country, do not wish to have drafts levied on us at all. When it is a question of large sums and for transactions of metals, etc., this may pass, but for general lines of goods and smaller amounts it is quite out of the question. Other firms suggest cash with the order, which means that we should have to intrust them with cash two, three, or even four months before we get the invoice and documents for the goods. Yet again, others a trifle more accommodating, appear willing

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to accept our terms, but state that they will not allow the cash terms they give on the other side unless they receive payment within ten days of dispatch.

On the one hand we can not afford to lose the 2 per cent for cash, but on the other hand it is impossible to comply with such a request, unless we keep funds lying idle in New York for the special purpose of paying our invoices there. Even if we did so, it would mean an extra commission besides the loss of a good deal of interest. When, however, firms have proved themselves reasonable enough to suggest the latter alternative they usually end by being amenable to argument, and, as a rule, after the exchange of a few letters to make them see that we are in earnest and will not do what they want, they give way. It is, however, a pity that there is so much correspondence necessary to obtain what ought to be granted without delay, and of course this attitude of the greater portion of the American manufacturers we have had to deal with does not make us eager to extend our relations with them, and is decidedly discouraging when compared with the replies we get to similar inquiries addressed to other foreign countries.

MILLS WORKING OVERTIME.

The London correspondent of Dun's Review writes as follows:

Business is still increasing in the Yorkshire woolen district, manufacturers generally working overtime. Considering the fact that the raw material is at record price, this activity speaks well for the genuineness of the demand, for manufacturers are only buying sufficient to meet their immediate needs. Prices of wool have made a further advance during the month, for not only are stocks greatly depleted, but consumption has increased. The home trade is reported brisk, a term which might also be applied to the condition of the European and colonial trades, while orders from America are coming in more freely.

Business generally in cotton manufactures was brisk up to the time when bad weather reports came to hand, but this news somewhat checked operations, and since then the trade has been irregular. Nevertheless, everything points to improvement, inquiries from eastern markets being particularly numerous. In some cases the demand has far outstripped the supply, and buyers are complaining of having to wait for deliveries.

IRON AND STEEL—SHIPBUILDING.

From every center a brisk business is reported, and the demand both for the raw material and its various products is sustained. Advances in prices for finished articles in iron and steel are announced, and new orders are especially numerous. Electrical engineers, particularly in the lighting branch, are very busy with work, while cycle makers, considering the time of the year, are fairly active.

Steel plate makers have put up prices another 5 shillings per ton, and in the shipbuilding trade rates have materially advanced during the past few weeks. It is stated that there is now sufficient work on the Clyde to keep the shipbuilders of that river busy for the next two years, and contracts are still coming in quite briskly. Sheffield, Glasgow, Birmingham, Barrow, Middlesbrough, Newcastle, and every other engineering center have abundance of orders in hand, to a very large extent this business being for export.

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VALUABLE PLANT FOR EDUCATIONAL PURPOSES.

Consul Halstead, of Birmingham, furnishes the following regarding illustrations of mining methods used by the Birmingham University:

The scientific department of the new and important Birmingham University has in its power station and in its machinery and metallurgical buildings and plants its illustrations of mining methods in the form of shafts, tunneling, and mining ventilation systems, an equipment which is perhaps as complete as that of the technical department of any university in the world. Certainly those who were responsible for its installation had seen and studied the outfits of the scientific departments of the greatest universities of America and the continent of Europe and had reasonably ample means to carry out any plans they thought necessary. My attention was called to the fact that a plant of this kind has an availability for service useful to a community in a way additional to the primary purposes of affording facilities for students, by the offer which the professor of engineering at the university, Mr. F. W. Burstall, was able to make to his colleagues at a meeting of the Institute of Mechanical Engineers, upon which occasion he made the speech of the evening.

The professor was able to offer his fellow-engineers the plant of the university power station for certain experimental testing work. At the meeting there had been a discussion on the advantages and disadvantages of steam jackets, and regarding the question of valve leakage in steam engines, and the professor having dealt with these two subjects from his standpoint, and having recognized in fitting terms the merit and laborious character of the work that had been done by the research committee of the institute, expressed the opinion that further engine-valve experiments should be carried out to ascertain particularly the qualities for such service of the various metals. He said there was ample opportunity for complete experiments with steam engines at the Birmingham University power station, and then told his colleagues he would be pleased to place the plant at the disposal of the research committee. If his offer were accepted it would not only be using the plant for useful scientific purposes, but as the tests would probably not be hedged with any precautions for secrecy, the most interested and energetic of the students would not only have the opportunity of witnessing some of them, but would also be able to get in touch with leading engineers and cull an inspiration for good work.

Some manufacturers of machinery, engines, etc., took advantage of the advertising value of having their articles used by coming engineers and in a position where they could be seen by prospective buyers, and presented the university with good examples of their best work.

LUNACY IN LONDON.

London has 26,739 persons on its lists of lunatics. Of these, 24,282 are supported by the rates. The county council is at its wits' end trying to devise accommodations for the rapidly increasing numbers of the city's insane. January 1, 1904, England and Wales, with about 32,000,000 inhabitants, had 117,199 insane persons—an increase of 3,234 over 1903. The ratio of the insane to every 10,000 of the popu-

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lation went up from 34.14 to 34.71 in twelve months. This almost incredible and dangerous increase is far beyond the recorded increase in the Kingdom's population. Indeed, the decade 1894–1904 shows that the number of the insane was as 1 to 327 in 1894 and as 1 to 288 in 1904. At this rate of increase the end of England's supremacy in many lines is in sight. Luckily, before it is too late, legislation may devise methods of meeting the matter and securing a remedy.

Up to date all efforts at a successful explanation have been unavailing. The expense of fitting up quarters for these people has forced London and other places to a serious consideration and investigation of the whole problem and all points connected therewith. The foregoing facts and figures are from a Daily Mail clipping sent by Consul Liefeld, of Freiburg, Germany.

SCOTLAND.

EDINBURGH'S EXPERIENCE WITH ELECTRIC LIGHTING.

Consul-General Fleming, of Edinburgh, briefly describes Edinburgh's experience in directing its electric light plant. He recites:

Of the public utilities in this city only one is carried on by the municipal corporation, viz, electric lighting. This undertaking has now been in operation for ten years. For the twelve months ended May 15, 1905, the net capital expenditure was $252,865 (the total capital expenditure for the entire period of ten years being $4,366,686); revenue for the year, $578,867; costs, excluding interest and sinking fund payments, $235,886; interest on capital expenditure, $104,079; sinking fund for repayment of capital expenditure, $136,018; net profit before placing anything to reserve fund, $102,884; reserve fund, $83,192; units sold, 11,648,501; total cost per unit sold, excluding interest and sinking fund, 1.998 cents; price charged per unit for private lighting 7 cents; for power 2½ cents; for public street lighting, $53.53 per arc lamp per annum; number of arc lamps, 998; number of 8-candlepower lamps connected, 743,331; number of consumers, 8,334. Of the net profits, the sum of $19,695 was credited to city rates and taxes.

In 1896 the charge for private lighting was 12 cents per unit, for power 7 cents per unit, and for arc lamps $97.33 per lamp. By the act of Parliament authorizing the electric-lighting scheme, the corporation is empowered to provide a reserve fund and accumulate the same until the fund amounts to one-tenth of the aggregate capital expenditure, "which shall be applicable to answer any deficiency at any time happening to the income of the undertaking, or to meet any extraordinary claim or demand arising against the undertaking." This reserve fund now stands at $379,580.

MALTA.

DEMAND FOR AMERICAN BOOTS, SHOES, AND PAINTS.

Consul John H. Grout, of Valletta, furnishes two short paragraphs in which he explains that American manufacturers, by proper effort, may secure extensive sales for boots, shoes, and paints in the island of Malta. Mr. Grout offers to furnish the addresses of dealers in

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Malta to such American manufacturers as will apply to him. The furnishing of these addresses would be expedited if consuls would, when making their reports, furnish them promptly to the Bureau of Manufactures through the Bureau of Trade Relations, Department of State. Mr. Grout's report follows:

It was only a very few years ago that but few ready-made boots and shoes were imported by Maltese firms. During the last two or three years, however, experiments have been made by them and the result has proved so satisfactory that in most of the shops good-sized stocks may now be found. In one place visited I was much surprised to find ready-made American boots and shoes. These were obtained from England. All of the shops here make boots and shoes to order and always have. The price of a pair of custom-made shoes, or boots, as they call them here, varies from $3.50 to $5.50. This applies to ladies' as well as men's boots and shoes. Ready-made goods bring about the same prices. This market needs lines of ladies' slippers, such as may be found in any American shoe store. During the winter season there is a brisk demand for dancing shoes. In looking about I find that large numbers of Austrian boots and shoes have been imported. I believe that there is a chance for a good sale of American boots and shoes, providing the market is worked right. By this I do not mean with printed matter. The American goods I have found here were not introduced in that way, but by drummers from England who make periodical visits. Several makes of our $3 shoes would find a good market here. If it is impossible for American manufacturers to send personal representatives here it would be a good plan to send samples. The buyer then sees what he is buying. I will send lists of the most important Malta firms to American manufacturers who may desire to investigate.

ATTRACTIVE WRAPPERS NEEDED.

Consul Grout, in the following paragraph regarding ready-mixed paints, furnishes hints relative to the style of wrappers that should be used on the packages. This is an apparently trifling matter, but it is one of those little things that is important in seeking to penetrate foreign markets, and one which our manufacturers should not overlook:

I have recently had a conversation with the proprietor of one of the largest hardware houses here, during which he made several suggestions, some of which will interest American merchants. The merchant referred to maintains several branch establishments in various parts of the island of Malta, and although not long established is doing a very large business and upon progressive lines. In addition to dealing in hardware, of which his stocks are well represented by American products, he sells large quantities of various classes of paints and oils. Lately he has been dealing in paints of various shades made up in 1-pound tins. He also carries a stock of British and other makes of the same weight. He has tested the American paints and finds them much superior to those of other nationalities. He finds one obstacle, however, in making sales of the former, on account of the severe plainness of the labels and wrappers. To use his own words, "When a customer comes in for paint, he usually selects the tin which is covered

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by the most attractive label or wrapper, almost regardless of the quality, and for this reason I often have difficulty in selling the better and American article. Buyers in this market are very peculiar in their likes and dislikes. I would prefer to deal wholly in American paints on account of their superiority. As you will see, my shelves are well filled with American hardware, and on account of the neatness of make, etc., I have no bother in inducing a customer to buy. I use 1,000 pounds of paints each month, and can increase this output if the matter of improving the coverings of American tins can be effected."

Almost every direct steamer from New York brings good-sized consignments to this merchant. At the present time he is interested in coin novelty machines and has already sent over quite a large experimental order. Some of the above points may well be considered by our merchants at large when reaching out for this trade. I shall be pleased to send lists of Malta hardware firms to American houses on application.

MOVEMENTS AMONG THE FLOUR PRODUCERS.

Consul Grout further writes regarding opportunities to sell grain and possibly flour-mill machinery in Malta. He says Malta seems to be improving and increasing her facilities for the manufacture of flour. Recent high and almost prohibitive prices for wheat, or at least American wheat and flour, gave the millers here quite an impetus, and they have not been slow to take advantage of it. Not so long ago large quantities of both wheat and flour were imported from the United States. When we had about gained a permanent market, prices went up and trade in our products came almost to a standstill. To-day, large quantities of Taganrog wheat are being brought in. This market requires a hard red wheat, but when the softer American variety can be judiciously imported it is used to blend with the Russian harder article. As may be inferred, only the Russian wheat is in use to-day. There are five private mills engaged in the manufacture of semolina, in addition to the large Government establishment. All of them are now equipped with modern machinery. The latest one to be started is that owned by the Malta Steam Flour Milling Company. This mill, being the latest, is equipped with every accessory that an up-to-date mill should possess.

AMERICAN MACHINERY EMPLOYED.

A large part of the machinery employed is of American manufacture. Its capacity is about 52 sacks of flour each working day of twelve hours. Six breakers are in constant operation. The mill is arranged to grind both hard and soft wheat, and, in view of the latter, I have spoken to the management in the hope that it might give a trial to American red wheat and some varieties of our soft. Those with whom I have conversed upon the subject seem strongly disposed to comply should quality and cost offer them any inducement. To this end I have been requested by the company to place them in connection with such American dealers as may care to enter into this trade.

SAMPLES REQUIRED.

Samples are required where possible, and the firm may be addressed as above. For Malta unusually good facilities are afforded by this mill

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for unloading. Up to the present vessels have been anchored in the harbor and cargoes of wheat have had to be lightered; passing through many hands several times, it will be seen that this has added to the cost. With the mill in question the vessel moors alongside the mill and discharges into it directly. An expert miller has been engaged, and as the working of this new mill will be conducted on more scientific principles than most of the older local mills, the blending of different qualities of wheat will come into play; and American wheat should, if conditions as to quality and price admit, once more find a market here. The matter of direct shipments from New York to Malta is no longer an obstacle, excellent facilities being provided. I believe that possibly the Farrugia Flour Mills, located here, might also prove a customer for our wheat. Much interest is displayed here in the matter of American macaroni wheat, and I believe it would be a good plan for our dealers to include samples of this article with others when sending to local millers.

AMERICAN MERCHANTS AGAIN ADMONISHED.

In response to letters from American exporters and importers, Consul Grout writes:

I have recently received many letters from American exporting and importing houses looking for Mediterranean trade. Speaking for Malta, I can say there is considerable to be gained here, provided desires of the merchants as regards shipment, etc., are carefully observed. In the past much trade has been lost on account of goods being sent contrary to instructions. For instance, there is a direct line from New York to Malta. Many times the Malta merchant directs his goods to be sent by this route in order to avoid delay, possible damage through rehandling at transshipping ports, and increased freight rates. Shippers in the United States have often ignored these instructions The goods have arrived long after they were expected and often at a time when they were useless as regards chance of disposal. Such treatment has not given much encouragement to buyers here to repeat the experiment. Some exporting houses in the United States constantly retain space in ships going to England and European ports. Some of this they use for goods destined for Malta instead of following instructions. It is a losing game in the end and general American trade suffers. Several of our shippers send only by the direct route, and the result is that nearly every ship arriving brings their goods.

MALTA FEVER.

The many Americans who visit the countries of the Mediterranean will be interested in the results of a scientific investigation of the so-called Malta fever prevalent in the countries adjoining the Mediterranean Sea.

The Royal Society of England recently sent a commission of scientists to countries bordering the Mediterranean Sea to investigate the causes of the so-called Malta fever. They have reported that the disease is probably transmitted to human beings by domestic animals, especially by goats. The examination of the blood of goats showed a plain reaction with reference to Malta fever, and a close examination of eight different flocks of goats had the result to demonstrate that

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about one-half of the number showed this suspicious condition. It was even found that some apparently healthy goats secreted the bacilli of the Malta fever in their milk in large quantities. It is therefore very probable that the consumption of goat milk transmits the disease to human beings. This conclusion is supported by the fact that at Gibraltar, where Malta fever is very common, the milk consumed is almost exclusively goat milk.

FRANCE.

CONSUMPTION OF EGGS AND MILK IN PARIS.

VARIATION IN AVERAGE PRICES—SOURCES OF SUPPLY—THE OCTROI DUTY.

Consul-General Mason, of Paris, in response to inquiries, furnishes the following report on the consumption and prices of milk and eggs in that city:

The average price at which milk can be bought in large quantities throughout the year is 15 centimes (3 cents) per liter, collected in the rural districts. In Paris the retail price varies from 6 to 10 cents per liter, according to quality, full milk being naturally more valuable than that which has been skimmed. In Paris the average price of pure milk is 8 cents per liter (a liter contains 1.0567 quarts), which would be 33.8 cents per gallon. In certain districts of Paris philanthropic societies have opened stations at which pure milk is supplied to the poor at a normal price of 6 cents per liter, or about 25.3 cents per gallon.

During the year 1903 there was imported to France but 396,433 liters of milk, valued at $12,079, most of which came to the frontier from Belgium and Germany, while during the same period there was exported from France, chiefly to England and Germany, 2,957,220 liters, valued at $125,563. From Switzerland there was imported during 1903 condensed milk to the value of $203,178, while the exports of condensed milk from France to England, the Netherlands, and China amounted in value to $134,614. Condensed milk is made in Normandy and sold in Paris from 10 to 12 cents per tin, but the Swiss brands are generally preferred, although more expensive. The French makers of condensed milk are Compagnie Générale des Laits purs, Neufchatelen-Bray, Seine-Inférieure, Lait Condensé Français, La Chapelle Yvon, Calvados, Laiterie du Domaine du Tremblay, Montreuil-l'Argillé (Normandie).

The milk supply of Paris is derived from the surrounding country within a radius of 60 miles from the city, but a portion is supplied by the rich grazing Department of Seine-Inférieure.

COST OF EGGS.

The cost of fresh eggs varies in Paris with the season of the year, being as high as 26 to 30 cents per dozen. Eggs of the choicest grade, guaranteed to be freshly laid, sell here as high as 3 to 5 cents each,

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but ordinary eggs, such as are used for cooking and other purposes, are imported in enormous quantities and sell at from 18 to 24 cents per dozen. The eggs imported to France come chiefly from Italy, Russia, Austria, and Turkey, and amounted in 1903 (the last year for which we have complete statistics) to 33,401 metric tons, valued at $6,456,393. The yolks of eggs, which are used for tanning and other industrial purposes, come from China and Turkey, and are imported regularly in large quantities. The total value of eggs exported from France in 1903 was $5,079,953, of which something more than half went to Great Britain. The duty on eggs coming into France is 10 francs ($1.92) per 220 pounds, general tariff, and 6 francs ($1.15) per 220 pounds, minimum tariff, i. e., from a country having a reciprocal treaty with France. Milk pays 5 francs and 2.50 francs, respectively; condensed milk, 10 francs, general tariff, and 5 francs, minimum tariff, per 220 pounds, if without sugar. When sugared less than 40 per cent, the duty is 50 per cent of the duty on sugar plus 8 francs, general tariff, and 40 per cent of the duty on sugar plus 6 francs per 100 kilograms, or 220 pounds, minimum tariff. There is, in addition, an "octroi" duty for entering the city of Paris of 4.20 francs (80 cents) per 220 pounds on eggs.

DEMAND FOR MACHINERY.

As a result of existing conditions in France, which affect the relations between capital and the lower grades of labor, there would appear to be a definite demand for the most improved and effectual machinery for excavating and loading earth upon cars or carts in railway or other surface excavations. If the manufacturer of "Park's automatic loader," which is understood to be a typical machine of this class, will send his name and address, with the price of his machine and the conditions of delivery, to the American consulate-general in Paris he will be placed in relations with parties who desire to make an immediate purchase of several machines and give them a highly favorable introduction into this country.

OLIVES AND OIL.

QUALITY AND GROWTH IN FRANCE.

Consul Murphy, of Bordeaux, reports, in response to an inquiry, that while olives are not grown within the limits of the Bordeaux consular district, the port of Bordeaux is considered the world's principal market for olive oil. He writes:

It is shown by the records of the consulate that the export of olive oil from this port to the United States in the fiscal year ended June 30, 1905, amounted to the very considerable sum of $332,490.34, and for the quarter ended September 30, 1905, $75,685.52. The finest quality of olive oil is that produced east of Cette, along the French Mediterranean coast and Italian frontier, being known as "Huile de Nice." Ranking next in quality comes the oil produced in Italy. It is known under various names, taken generally from the place where the olive is grown. Then come the Spanish oil, considered third in

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point of quality, and the oil of Algeria and Tunisia, which are of somewhat inferior quality. The olives grown in France, northern Italy, and northern Spain are usually pressed toward the end of December or early in January. Owing, however, to the unfavorable weather conditions of the past few months, which retarded development, the French olives will not be pressed before the end of January, 1906.

The olives of southern Italy, southern Spain, Algeria, and Tunisia are generally pressed in the month of November. The crude oil from the several localities mentioned is shipped to Bordeaux and stored in vaults which are kept at an evenly warm temperature. A few of the most reputable of the packers never blend or adulterate their oils, trusting to careful filtering and extraordinary care in manipulation for the quality of their products. Some of the packers blend the different oils, the result being a smooth oil, sweet, and of good quality and flavor. Others of the packers use "peanut oil" to a considerable extent as an adulterant, but it is by no means either dangerous or harmful. American "cotton-seed oil" is also used by some unscrupulous packers, and it is probable that owing to the short peanut crop of Africa (from the nuts of which country the peanut oil is produced), a greater quantity of cotton-seed oil than usual will be placed on the market masquerading as "olive oil."

As to the process of filtration which the crude oil undergoes, I have found it simply impossible to get definite information. Each packer has his own system of filtration and he guards his secret most jealously. I have failed to ascertain the nature of the filtering material, for none of the packers care to disclose the secret of their business. The residuum of the oil after the filtering is used for lubricating purposes, and is also used in the manufacture of soaps which appear on the market as "made from pure olive oil."

THROUGH FREIGHT TO THE UNITED STATES.

Consul McNally, of Liege, writes that, in order to develop the trade with North America, the Western Railway of France has entered into an arrangement with the Compagnie Generale Transatlantique, for the carrying of slow freight (petite vitesse) from all stations along its lines to the port of shipment at Havre direct to New York. Distance governs the rate. For freights entered at a station within a set radius of about 156 miles from the port of embarkation at Havre, a lesser charge is made than for goods entered beyond that distance. The rate is established upon a basis of 1,000 kilograms (1 ton), and varies in proportion to the weight of the shipment. The rate includes railway transportation to the port of Havre and the embarkation and placing of the goods on board ship for transportation direct to New York. Under the regulations governing the shipment of merchandise, the shipper has, if he so desires, the right to employ a broker at the port of Havre to facilitate the usual formalities as well as the transit to the United States. The steamers for this special service are the *Hudson*, *Louisiane*, *Bordeaux*, and *California*, and will sail from Havre at fortnightly periods from the date of the initial sailing, which was the 9th of September last.

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BELGIUM.

SUCCESS OF AMERICAN ARTISTS.

SENSATION IN ARTISTIC CIRCLES—ACCEPTANCE OF AMERICAN PICTURES.

Consul-General Howe, of Antwerp, Belgium, furnishes an interesting account of the success of American artists at the fine arts exhibition at the Liege, Belgium, Exposition. It is as follows:

It is generally accepted on the Continent that the American section of the fine art department at the Liege exhibition this year has made a sensation in artistic circles. For years it has been the custom abroad to shrug the shoulders at American art productions, American painters being treated in a very patronizing manner by their European colleagues with a sort of "Well done, my boy," and a figurative pat on the head. This attitude is, of course, due to prejudice, the followers of the older schools of art being quite unable to realize that products worthy of their own brushes and chisels can possibly emanate from the New World. And yet the exhibition at Liege has shown that such is the case, and French and Belgian artists are not only surprised but somewhat disconcerted at the result. The Countess of Flanders, in congratulating the American commissioner-general of fine arts, said the great proof of success in the American exhibit was the fact that the carpet was more worn before the pictures in this section than elsewhere—a graceful compliment indeed.

AMERICAN ART HIGH.

This is the first occasion on which United States art has been officially represented in Belgium, the result of a determination on the part of the commission to show the world that Americans are not only industrial, but also deserve a high rank in the artistic world. In order, however, to accomplish this the commission has had a battle to fight from the beginning. First, the Government subsidy or appropriation was but a paltry sum of $2,500—totally inadequate for the commission to realize its desire to correct the errors made at the Paris Exhibition of 1900, when the pictures sent in were unsatisfactory.

The general scheme was to let American artists in America have their own jury, select their own pictures, and come over to Liège to hang them themselves. Of the three rooms in the gallery allotted to the United States, one and a half were to be given to American artists from America and one and a half to American artists residing abroad. Unfortunately the appropriation was too small to allow this plan to be carried out, and the commission therefore confined themselves to the very best American pictures Europe could produce—that is, from London, Munich, Vienna, and from Paris and other parts of France. Six hundred paintings were offered and 100 accepted.

AMERICA GETS GOLD MEDAL.

The success of the American section is greatly due to the indefatigable energy of its commissioner-general for fine arts, Mr. Lewis St. Ware, of Paris, who, in spite of the meager support given by the American

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Government, was determined that the United States should be worthily represented. That it was so may be seen by the fact that in proportion to the number of paintings exhibited America receives the largest number of awards. With the exception of Belgium and Holland, America is the only country receiving a gold medal of honor with a prize of 3,000 francs, awarded to the portraitist, John S. Sargent, of London, for his life-size, full-length portrait of the Countess de Clary, wife of the Austrian minister in Brussels.

The fine-arts jury considered the American department worthy of the State-authorized lottery of the exhibition, and purchased three paintings for the purpose, viz: "Evening, at the Pond," by Henry S. Bisbing who exhibited hors concours; Richard E. Miller's "Mother and Child," which has been most highly criticised by artists here; and Charles Sprague Pearce's "Squall," a masterpiece.

AN ERRONEOUS IMPRESSION.

The fact that American artists were unable to participate in the exhibition here is to be deeply regretted, because the press and the artists of the country are under the impression that the United States can not alone produce artists; that American artists develop their talent in Germany, France, Italy, or Belgium, and until the Government sees fit to provide a sufficient appropriation for Americans to have a place in foreign exhibits that impression will remain. The foreign artists are flattering themselves that it is their influence that brings out the talent of these American artists who have attained sufficient reputation to be received here. It is generally believed that the American nation is incapable of creating a national school, and it is this belief that Commissioner-General Ware is trying to dissipate.

The work of such artists as Sargent, MacEwen, Carl Marr, Ridgway Knight, Bisbing, Bridgman, Harrison, Miller, Pearce, Vail, and others, well known in Paris, is remarkable and worthy of any of the reputed foreign artists, a fact emphasized by the awards given to the American section by the international jury. Yet artistic circles in Europe refuse to consider these artists as really American, claiming them for their own because they have chosen to work abroad. It is, therefore, high time that the American artists at home joined with their countrymen abroad to show the world that they have a school of art worthy the name.

COMMERCE FOR NINE MONTHS.

Consul-General Roosevelt, of Brussels, furnishes the following statistics of the commerce of Belgium for the nine months ending September 30, compared with the same months of 1904:

	1904.	1905.
Imports	$384,806,102	$408,480,254
Exports	288,949,371	306,373,695

The customs fees received amounted to $7,924,024, an increase of $918,750, as compared with the corresponding period of the preceding year, or 13.1 per cent.

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The maritime movement is given as follows:

Entered, 8,491,137 tons in 1905, against 8,345,371 tons in 1904, an increase of 145,766 tons, or 1.7 per cent.

Cleared, 8,463,773 tons in 1905, against 8,269,404 tons in 1904, an increase of 194,369 tons, or 2.4 per cent.

AUSTRIA.

FARM IMPLEMENTS.

ONLY ONE WAY TO SELL ABROAD—PRIMITIVE FIELD METHODS.

Consul McFarland, of Reichenberg, Austria, writing in reply to a request for information relative to the prospects for selling American farming machinery and implements in his district, says:

Small American farm implements or tools are now to be found in almost every hardware shop, but larger implements, such as plows, cultivators, mowers, etc., are purchased either through agents or from factories here or in Germany or from distributing houses in Vienna and Prague. There are literally no "dealers" in such goods. The same is true of wagons and other vehicles. The large Austrian and German manufacturing concerns maintain local agents in the larger towns. This course is also followed successfully by some American firms, notably the McCormick Company, which does an enormous business throughout the Continent, maintaining agents everywhere, observing local trade customs and advertising extensively in the local language.

WOMEN THRASH WITH FLAILS.

In this region, except for the few large estates of titled people, the farming country is divided into the small holdings of peasants of the different classes, who follow the most primitive methods. Field labor is done largely by the women and children of a family, and is so cheap that even if able these farmers would purchase no machinery. Grain is chiefly thrashed by women with flails after the fall outdoor work is finished. To effect sales, therefore, is difficult. You have your own agents in the field, employing some of the local "machine agents" who travel the territory, or enter into the proper relations with wholesalers or distributers in Vienna and Prague. One Vienna firm—Robert Siercke, with branches at Prague and Budapest—makes a specialty of American importations of all kinds, advertising them thoroughly and in the German language of course. He understands the situation as regards general market conditions as well, perhaps, as any man in Austria, and it might pay you to get into communication with him.

Locally—and presuming that your letters, advertising, etc., will be in German—you can not do better at first than to present your propositions to the "Landwirtschaftlicher Ankaufsverein für das nordöstliche Böhmen" in Friedland. This is an association of farmers, or a grange, which purchases wholesale for members such machinery, implements, etc., as are required. Adolf Müller, Grottau, is a large manufacturer of farm implements. He imports some American

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specialties and parts. A. & J. Loeffler, Franzendorf bei Reichenberg, conduct a similar concern and also import.

Provision for Building War Vessels.

Consul-General Guenther writes as follows from Frankfort:

A correspondent of the Frankfort Stock Holder, a financial organ of prominence, has written an interesting letter from Budapest to that paper on political and industrial questions, in which it is stated that active steps are being taken by Austria-Hungary to extend its shipbuilding industry. As to the latter I have gathered the following:

The construction of a new shipbuilding plant has been determined upon which will enable Hungary to build her own vessels for war and commercial purposes. Two years ago the city authorities of Fiume had petitioned the Government to promote the construction of such shipbuilding yards at this Hungarian port, as Hungary so far possessed only the small shipyards "Lazarus," which are really only repair works. Last year the Austrian-Hungarian Government determined to have one-half of the new vessels for the navy built in Hungary. The Hungarian authorities selected the Associated Shipbuilding Machine Works "Danubius," at Budapest, to construct 10 torpedo boats and 6 torpedo destroyers, at a total value of 16,000,000 crowns. These works will now construct shipyards at Fiume on a large scale, equipped in conformity with all demands of modern shipbuilding, and the establishment will be ready for full work next year. They will employ 1,000 men, and it is stated that thereafter Hungary will be able to build 50 per cent of all the vessels for the navy of Austria-Hungary. The Danubius has shown its competing ability in the construction of war vessels during the last few decades and has received orders from the Balkan States and from Turkey. It also built the last Danube war vessels for the Austrian-Hungary navy.

ITALY.

PROGRESS IN TRADE.

AGRICULTURAL AND INDUSTRIAL RENAISSANCE.

Italy is rapidly advancing to a prominent place among European industrial and commercial countries. Her money is again at par. From her children in all parts of the world a steady golden stream is pouring into her banks and industrial institutions. The water in her hills is helping to regain a good deal that was lost because of the absence of coal. Power is rendered plentiful by her Alpine and Apennine streams. Consul Cuneo, of Turin, in the following report deals with his own district, but the picture he paints is applicable to all parts of the peninsular kingdom. The efforts of Italian manufacturers to establish factories of all kinds warrants the work of United States agents such as are suggested by the consul. He writes:

Exportations to the United States are steadily increasing. The total from this district for the year ended June 30, 1902, was $977,065,

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and for the year ended June 30, 1905, $1,197,814, indicating quite an increase. The most important articles exported to the United States from this consular district, are raw silk, vermuth, automobiles, cheese, chestnuts, human hair, canned goods, glycerin, gelatin, glue stock, hats, plumbago, tartar, talc, and watch jewels. In regard to importations of American goods to this city and district it is difficult to give figures. Some of the goods are imported to Genoa, thence here; but the great bulk of them come from distributing centers, such as London, Berlin, Milan, and Genoa. The grape crop, so important in this district, is quite light this year, the weather having been unfavorable and the phylloxera having done much damage, hence the prediction that wine will be much higher next year. Here immense quantities of wines are used at meals more freely than we Americans use water and coffee.

COCOONS, CORN, AND RICE.

The cocoon crop in this district the past year, in round numbers, was 12,000,000 pounds, a million and a half pounds less than the previous year. And here it is a suitable occasion for me to correct an error of mine into which I fell by erroneous information when, in my last report, I stated that Piedmont was the greatest cocoon-growing State in Italy, Lombardy being the State which carries off the honor.

By reason of irrigation and other favorable circumstances the corn and hay crops are excellent, much of the corn being beyond the reach of frosts, and two and three crops of hay have already been cut, and and in some instances a fourth crop will be gathered. I am informed that on irrigable lands hay crops are the most profitable. Such lands command fabulous prices.

This district is considered the greatest and best rice-producing State of Italy, but none is exported to the United States through this consulate. It goes from Genoa and elsewhere, and it is said that before reaching the States it is mixed with cheap and inferior rice. Here I am reminded to what great extent the practice of adulteration of food products is carried. A gentleman of much experience in the world, speaking of this evil, and very often complaining that his table wine does not meet his expectations, not being what he bargained for, quotes the saying of an old Italian wine dealer, who said: "My son, wine is made with many things—also with grapes."

MANUFACTURING ACTIVITIES.

The activity in the manufacturing industries of this city and vicinity is very marked. In every direction new plants, many of them extensive, are either about completed or are in course of erection. These plants turn out almost all kinds of goods. At a recent exhibit I saw quite a display of American agricultural implements. I noticed that they were much admired and my impression is that with proper efforts a good trade in that line can be worked up in this district. That, however, can not be accomplished by the distribution of circulars in the English language, but by the personal efforts of skilled agents, men who speak Italian and impress those with whom they wish to deal with confidence, make them know that they propose to do them good. Then, too, much depends upon the character of men who are appointed as agents. Some of the gentlemen handling American goods here I personally know are noted for their untiring energy and

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great intelligence, for they will speak to you in Italian, French, English, German, or Spanish, as occasion may require, and such men are bound to succeed.

Watch jewels seem to be a specialty in Arona and Invorio-Inferiore. The jewels exported to the United States from those two places the past year were valued at more than $23,700. A few years ago practically none were exported from this district.

POPULARITY OF AUTOMOBILES.

The manufacture of automobiles here seems to be raging. Indeed, it is surprising the amount of energy and capital that are devoted to this practically new industry. The shipments to New York by one firm the past year, ended June 30, amounted to over $124,000. And it is reported that the same firm expects to export more than double that amount to New York this year. I am also informed that some of the firms announce that they have more orders than they can fill, orders being received only on condition that they be completed at some future time.

Turin is particularly known for its vermouth (or vermuth) in the production and sale of which great fortunes have been made. It is exported to all parts of the world. That exported to the United States the past year, ended June 30, amounted to $352,877. That, of course, includes that exported to Manila and Porto Rico.

In this city some of the finest stores and locations are devoted to sewing machines, phonographs, typewriting machines, and cash registers, all indicating that they are doing good business. In general stores may be seen hardware, canned goods (especially meats), dried fruits, and many other goods.

The leading articles manufactured and produced in this consular district are cotton goods, chocolate (a great specialty), wax candles, baskets, hats, parasols, matches, leather, silk, vermouth, wines, porcelain buttons, talc, tartar, watch jewels, woolen goods, kid gloves, gunstocks, furniture, soap, etc.

AMERICAN COAL.

About four years ago quite a quantity of coal was imported to this section of Italy from the United States. Some dealers became enthusiastic, flattering themselves that they were about to reap a harvest in that line of business, but their hopes were soon blasted. A member of a firm that imported about 25,000 tons some four years ago tells me that they are not importing a pound, for the reason that they found themselves utterly unable to compete with the low prices of English coal and because of the high rates of transportation from the United States.

FOREIGN COMMERCE.

EFFORTS TO SECURE FOREIGN MARKETS—INCREASED EXPORTS.

Consul Dunning, of Milan, reports on the development of Italy's foreign commerce and the newly aroused ambitions of the country on the markets of the world. He says:

The statistics of Italy's foreign trade for the first six months of 1905 are significant in a way which will scarcely be ignored by keen Amer-

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ican exporters. The increases shown in recent statistics indicate something of the rapidly advancing power of Italy to not only supply herself, either by first origin or by purchase at good terms, but also to enter many of the world's markets. The maintenance of a stable financial basis through the admirably wise and conservative management of the Government, the intense enthusiasm of the people of all parties and classes over internal improvements, and plenteous visible means of support for such enterprises and an evident reaching out toward other markets and the development of those existing already—these are the local signs by which the sharp-eyed observer can read the growth of a new spirit in Italy, and they are well and consistently borne out by the trade statistics of the year. I have already reported on Italy's determination to further extend her hold on South American markets and the beginning of a programme intended to bring the country into closer trade relations with Mexico. These items in the general campaign will be given important attention at the Milan World's Fair, to be held in 1906.

STEADY ADVANCE.

That the advancement of the country is going steadily toward the mark set for it by both the Government and the great commercial interests seems to be proven below. The trend of the American inquiries reaching this consulate convince me that our own exporters in many instances lack sufficient information of the conditions in Italy and that to place American goods here means to meet the sharpest competition of wide-awake manufacturers, who are at last fully alive to their own capabilities and to the opportunities offered in their home territory.

The increase in Italy's foreign trade as to exports and imports comprising the first sixteen categories of the customs tariff—raw material, material partially worked, manufactures and food products—for the first six months of 1905 amounts to $22,337,122, divided as follows:

Year.	Imports.	Year.	Exports.
1904	$191,372,198	1904	$145,076,213
1905	201,245,333	1905	157,540,200
Gain	9,873,135	Gain	12,463,987

It will be observed that the augmentation of exports is greater than that of imports, the difference being accounted for principally by an increase in exports of manufactures, while there has been a certain increase in food products. On the other hand, the export of raw materials experienced a considerable decrease. The detail of these changes follows:

Class of goods.	1905.	Gain or loss over 1904.
Raw materials	$25,314,206	−$2,029,560
Partly worked	58,811,792	+10,692,260
Manufactures	35,820,585	+ 2,126,890
Food products	37,593,234	+ 1,979,314

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Imports in the above four groups show an almost uniform increase. The following figures show the value of imports and the gain over 1904:

Class of goods.	1905.	Gain.
Raw materials	$84,292,631	$2,029,562
Partly worked	41,407,790	2,563,025
Manufactures	43,816,734	2,032,346
Food products	31,328,777	2,844,400

The above four groups do not include precious metals, which show an increase considered to be due to the favorable condition of exchange and the Italian money market in general. The trade in precious metals for the first six months of 1905, as compared with a similar period of 1904, was:

Year.	Imports.	Exports.
1904	$2,511,880	$811,340
1905	12,322,040	568,660

The greatest increase in the raw material import is represented by coal, which shows a gain of $1,177,600 for the first six months of 1905, the imports for the corresponding months of 1904 having been $15,544,553. The increase in silk cocoons amounts to $983,076 over the $2,788,520 of imports in that class last year. The small industry in coral, ivory, mother-of-pearl, and tortoise shell also showed an increased importation of $235,120 over that of the first six months of last year. The continuous increase in the trade in raw cotton is an excellent sign of the development of the cotton manufacturing industry in Italy. The imports of raw cotton the first six months of 1905 aggregated 1,020,933 quintals, against 996,902 quintals the preceding year. In 1901 the imports were 773,112 quintals. Since then there has been a steady increase.

FERTILIZERS.

OPPORTUNITY TO INCREASE AMERICAN TRADE.

Consul Dunning, of Milan, reports that a good chance for American manufacturers of fertilizers to enter the Italian markets is to be presented by the Milan exposition of 1906. He says:

Italy makes no demand for any special variety of artificial fertilizer. The usage here is to select such fertilizing material as is suited to the particular soil under cultivation, and create a mixture which in the opinion of the local operator best suits the case. For this purpose, large quantities of natural fertilizer are used, the offal and scourings of the cities as well as the farms. Among many agriculturists this form of fertilizer is still highly regarded, partly for its low cost and partly because of the comparative scarcity of better material with which to make an artificial fertilizer.

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MINERAL PHOSPHATES IN USE.

Mineral superphosphates, however, are used on a large scale throughout the country, mineral phosphates from America and Algeria being imported for this purpose. Large amounts of hoofs, horns, dried bull's blood are imported from South America, but the supply is not nearly equal to the demand, and it is my judgment that Italian importers would be glad to find new sources of azote materials at any reasonable price and terms. Nitrate of soda is imported heavily from Chile, since it contains azote in a state easily assimilated in the mixtures made by experts here. The most popular "mixture" is the usual azote substance, with superphosphates and salts of potassium.

ITALIAN METHODS.

There are many manufacturers of fertilizers in Italy, particularly in the north. Their common habit is to bring into the country such materials as they need and mix them up to suit the special demands of the land in various sections. A commercial fertilizer of a general nature is practically unknown and I do not find any encouraging desire to import it among those whom I have interviewed. It appears that to introduce an American fertilizer, fully prepared from materials previously assimilated, the exporter would be first called upon to make the Italian field thoroughly acquainted with his claims and with his ability to make them good. The demand for fertilizing material is unquestionably strong and much exceeds the commercial supply. I think the demand will increase steadily, since Italy's progress in agricultural methods is quite in keeping with her broad and intelligent industrial and commercial methods. I think the opportunity for American exporters is good, and that this is the time to move. If American fertilizers could be shown adequately at the World's Fair to be held in Milan in 1906, as a part of the great section devoted to agriculture, it might result in a foothold being gained which, with a lively succeeding campaign, would, in my opinion, open the market.

At present the Italian demand for better fertilizers simply plays into the great and growing trade between this peninsula and South American countries.

THRIFT OF THE PEOPLE.

POPULAR ECONOMY AND ITS SIGNIFICANCE—INCREASED BANK DEPOSITS.

Consul Dunning comments on the reports of Italy's industrial revival which have been recently published in America, and furnished a detailed statement showing to what a degree the national savings are entering into the rapid progress of that country. He says:

While any one familiar with Italian conditions knows it is not true that 50 per cent of all Italian emigrants return to their native land on accumulating a small competency, it is true that in Italy itself the savings of the people who remain on the soil are constituting a principal factor in that "revival" which is attracting so much attention in other countries and which must be taken keen note of by American exporters, not only those dealing with Italy but with the

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South American countries, in which Italian influence is rapidly increasing in scope and power. It is my opinion that in both South America and Mexico American manufacturers are bound to soon feel the effect of the new industrial attitude of Italy; and while it is no doubt true that many Italians and much of their money return home, the influence of that movement is insignificant, in Italy's growing importance as a nation and a power, compared with that of the immense store of savings which constitute an internal strength and asset of the most positive and lasting value.

MOVEMENT OF NATIONAL SECURITIES.

Italy's national savings are indicated not only by the funds deposited in the ordinary savings banks, which amount to about 3 billions of lire (nearly $666,000,000), but are also shown by the steady return into Italy of Italian securities. This return movement is best demonstrated perhaps by the following figures: In the fiscal year of 1897–98 the nominal amount of Italian consols held abroad amounted to 1,592,000,000 lire, carrying an annual interest of 76,300,000. Compared with the consols held within the country, this figure is in the proportion of 18.90 in 100. Comparing the fiscal year of 1903–4, the nominal value of Italian consols held abroad was only 744,047,616 lire, with an annual interest of 36,500,000, which means that within a period of seven years the amount of consols reentering Italy was 847,952,384 lire, brought back by the more prosperous condition of the country. Thus, the percentage of consols held abroad was reduced in the period named—1897 to 1904—from 18.90 per cent to 8.56 per cent.

Further light on the savings of Italy is shown by a consideration of the public debt. This was largely placed abroad, and shows the effect of the same reentering movement of prosperity. In 1897–98 the public debt was placed as follows:

	Amount.	Interest.	Percentage.
	Lire.	*Lire.*	
Abroad	437,147,834	15,300,000	24.83
In Italy	323,834,983	46,300,000	75.17

In 1903–4 this debt stood—

	Amount.	Interest.	Percentage.
	Lire.	*Lire.*	
Abroad	405,714,283	14,200,000	32.18
In Italy	834,283,428	29,200,000	67.12

thus reversing entirely the position of the seven years previous.

The national savings of Italy have contributed toward the reduction of the national debt 270,000,000 of lire each year, and this apart from the deposited savings, which amount, in a round sum, to 100,000,000 (in banks). The economic future of a country which, in spite of the modesty of its industries and its lack of experience in world trade, and in spite of the fact that it is one of the youngest among the powers, with its commerce only in its infancy, can produce and lay apart a million lire per day, is scarcely to be regarded as doubtful.

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SILK ADULTERATION.

INEFFECTUAL EFFORTS TO SUPPRESS THE PRACTICE.

In Daily Consular Reports for May 27, 1905, a report from Consul-General Guenther, of Frankfort, Germany, was printed, relative to an international congress at Turin, Italy, called by the Silk Association of that province to deal with the question of silk adulteration. In the following report the consul-general gives the results reached at that congress:

Commendable as is the effort to prevent the ever-increasing "loading" or "weighting" of silk, it is evident that the tremendous competition in the markets of the world, which compels the manufacturers to produce goods of the best possible appearance at the lowest possible prices, has defeated the intention for reform which induced the calling of the congress. The conference was also not as well attended as was expected.

The report of the silk manufacturers of Como has demonstrated the difficulties for solving the problem in a very forcible manner; also the impossibility of controling and fixing the amount of permissible "loading."

The Italian deputy, Edoardo Giretti, proposed a sort of international trade-mark which would furnish a guaranty to the purchasing public that the goods are not "loaded."

Mr. Morel, the president of the "Union des Marchands" of Lyon, was against all efforts to discredit the value of "loaded" silk textiles, and asserted that the popularity of silk goods, and the extraordinary increase in the consumption of silk, could only be effected through the manufacture of cheaper qualities. Since 1880 the consumption of silk has risen, he said, from 8,000,000 to 20,000,000 kilograms (17,636,800 to 44,092,000 pounds). Without resorting to "loading" this increase would never have occurred.

THE GERMANS AND SWISS.

The delegates from Germany and Switzerland were also skeptical with reference to the propositions of helping the pure-silk question. After a four days' debate the conference at last agreed upon an international committee, which should report within three months how to decrease or regulate the excessive "mineral loading" of silks. The loading with vegetable substances was not necessary to be discontinued. The committee has also to study the question of a guaranty trade-mark, and another international congress, to be held next year at Como, will finally determine these problems.

The second part of the conference, devoted to discussions concerning artificial silk, disclosed the opinion that at present natural silk is not seriously threatened by the artificial article. The total amount of artificial silk now manufactured per year is hardly 3,300,000 pounds. While its use is restricted improvements in the culture of silk worms, which is possible, will result in cheapening natural silk, and this would counteract the competition of artificial silk.

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MILAN EXPOSITION PRIZES.

Consul Hannah, of Magdeburg, Germany, reports that the King of Italy has offered the following six prizes for an international competition on the occasion of the exposition in Milan in 1906:

1. Prize of 5,000 lire ($1,000) for a convenient and simple device to protect workmen in electro-technics from the currents with which they come into contact.
2. Prize of 10,000 lire ($2,000) for an improvement, a system, or a machine which has real practical value and possesses the property of newness.
3. Prize of 5,000 lire ($1,000) for an automatic car coupler.
4. Prize of 5,000 lire ($1,000) for what has been proven by actual use to be the best system for providing pure, healthy milk to thickly populated centers.
5. Prize of 10,000 lire ($2,000) for the best type of simple dwelling suited to the climate of southern Italy.
6. Prize of 5,000 lire ($1,000) for motor boats.

RUSSIA.

INCREASING TRADE.

IMPORTS AND EXPORTS—TRADE WITH THE UNITED STATES.

In spite of a complicated mass of adverse conditions, Russian trade, according to Consul Smith, of Moscow, has gone along with fair success, even showing an increase of some millions for the first six months of 1905 over the first six months of 1904. The consul writes:

The foreign trade of Russia for the first six months of 1905 amounted to $361,488,500, against $347,316,000 for the corresponding period in 1904, as follows:

	1904.	1905.
Exports	$195,110,500	$233,891,500
Imports	152,205,500	127,597,000
Total	347,316,000	361,488,500

The articles exported are divided into the following groups:

Articles.	1904.	1905.
Provisions	$115,546,500	$153,864,000
Raw materials	70,378,000	71,773,500
Animals	3,506,000	2,466,000
Manufactures	5,680,000	5,788,000
Total	195,110,500	233,891,500

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The distribution by countries was as follows:

Country.	Amount.	Country.	Amount.
Germany	$58,143,500	Turkey	$4,681,500
Great Britain	55,863,500	Spain	4,749,500
Holland	23,826,500	Sweden	2,571,000
France	16,025,000	Norway	1,898,000
Italy	14,728,000	Finland	9,699,000
Austria-Hungary	12,557,000	Other countries	12,023,000
Belgium	12,084,500		
Denmark	5,041,500	Total	233,891,500

EXPORTS TO THE UNITED STATES.

The exports from this consular district to the United States for the first half of 1905 amounted to $3,229,589, against $2,902,387 for the same period in 1904, or an increase of $327,202. The articles imported are divided into the following groups:

Articles.	1904.	1905.
Provisions	$20,536,000	$21,295,500
Raw materials	89,512,500	70,509,000
Animals	248,000	184,000
Manufactures	41,909,000	35,608,500
Total	152,205,500	127,597,000

IMPORTS.

The imports were received from the several countries named below, Germany leading the list with nearly $52,000,000:

Country.	Amount.	Country.	Amount.
Germany	$51,855,000	Italy	$2,550,000
Great Britain	19,914,500	Egypt	2,539,000
United States	13,101,500	Turkey	1,404,000
France	5,713,500	Norway	1,393,500
China	4,433,500	Finland	5,932,500
Austria-Hungary	4,217,500	Other countries	9,340,500
East India	2,624,000		
Holland	2,578,000	Total	127,597,000

SIBERIA.

OPPORTUNITIES TO SELL TOOLS AND MACHINERY.

The following report dealing with the industrial conditions and trade situation in Siberia is full of facts and suggestions that are of peculiar value at this time. Siberia, long looked upon as a wild waste land, fit only for a penal colony, is now known to be a land of unlimited possibilities. It is almost as fertile as the American prairies, contains thousands of miles of primeval forests, filled not only with useful and valuable woods but with vast deposits of fossil ivory, the world's richest and rarest fur-bearing animals, mineral deposits ranging from

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coal to gold, and the costliest of the earth's treasures. There are deposits of lapis lazuli, quarries of stones fit only for the palaces and splendid public buildings of the world.

Its agricultural, grazing, mineral, and forestal resources are just being opened up. The tools, implements, machines, etc., that have helped so much in the last one hundred years to make the United States what it is will be wanted in all parts of Russia. It is to help merchants and manufacturers meet the growing demands of Russia that such reports as this are intended. For this purpose they are of great value, for they put merchants, manufacturers, etc., in possession of facts gathered at first hand that would otherwise cost a great deal of money. The report was translated in the Bureau of Manufactures, and follows:

The London Commercial Intelligence Committee of the Board of Trade recently issued a bluebook which contains valuable hints to English manufacturers for the stimulation of trade with Siberia. Mr. H. Cooke, the author of the report, acting as agent for the Board of Trade, states that more energetic and methodical means must be pursued by the English exporters in order to secure a broader field for their wares in this great and almost unknown country. He spent three and one-half months in the region, traveling from Moscow by rail and boat over a distance of 6,000 miles, and advises his countrymen to visit Siberia and make a study of trade conditions, mainly for the reason that reliable statistics on the import and export trade are not to be had.

TRADE CENTERS EASY OF ACCESS.

The business centers can be easily reached from the railroads recently built. German, Danish, and American houses have already been established in both the eastern and western sections of the country. The managers of these establishments vie with one another in bringing salable goods to one of the most promising fields in Asia. Sweden and Denmark are supplying creamery apparatus; France, fancy goods and toilet articles; Belgium, firearms; Austria-Hungary, scythes and sickles. Many articles of English manufacture are imported, but the prices are usually too high to invite a steady sale.

In western Siberia, where the vast stretches are adapted to agriculture, a large number of Danish farmers have settled and have developed the dairy industry to a considerable extent, building up a flourishing export trade in butter with Great Britain and some of her colonies. The growth of agriculture and dairy interests has led to a substantial increase in the use of Russian and American machinery. The demand for this class of machinery will in time surpass all others. Although the demand for many articles of European manufacture is at present not very extensive, it will do no harm to enumerate several for which an inviting field is offered.

AGRICULTURAL IMPLEMENTS.

The use of modern agricultural implements is increasing very rapidly in western Siberia. The value of imports in this class, together with

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creamery apparatus, has shown a steady gain, increasing from $667,008 in 1898, $1,930,000 in 1901, $3,792,064 in 1902, to $4,709,200 in 1903. The principal cities of the farming district which surround many neighboring and more distant villages are Tscheliabinsk, Kurgan, Petropawlowsk, and Omsk, all having railroad facilities. To these may be added Pawlodar and Sempalatinsk. South of the railroad and more distant still are Tatarka, Karatchi, and Obi or New Nikolajewsk.

In several cities large American and Russian warehouses have been built—frequently ten or fifteen are found in one locality—where a sufficient quantity to supply any demand is always kept on hand. Machines of American make are to be found in all warehouses, while the Russian are exhibited in very few branches. Implements, with or without automatic appliances, such as self-binders, also horserakes, steam engines, and plows are in great demand. The special feature of these should be simplicity of construction, combined with lightness and ease of manipulation. It is a well-known fact that American manufacturers turn out annually over 2,000,000 machines, of which the greater number are sold at home, while the surplus is sold in foreign markets (Siberia included) on very liberal terms. Competition between English and American makes, especially in rakes and mowing machines, is impossible, because the former are made too heavy and clumsy. This applies with equal force to the German article. Competition with steam threshers and steam engines is possible, but these have not become sufficiently known.

PORTABLE ENGINES, MOTORS, ETC.

Besides the articles mentioned, a demand for the following can be created, namely: Steamboats, motor boats, water wheels, cheap filters, printing presses, mineral-water apparatus, car wheels, rails, sawing machines, spades, shovels, forks, locks, guns, and revolvers. Germany is reported to have supplied photographic supplies, cook stoves, bicycles, needles, and machines for the manufacture of brick and matches.

STEAM ENGINES.

To the present time no sales of portable steam engines have been made, although the desire of the farmers to use steam is apparent. Hence it would be possible, if there be several good crops, to induce a number of them to combine and purchase these engines, especially if an energetic campaign to that end is inaugurated.

There is a good demand for scythes, which are supplied mainly by Austrian and Russian firms, although a few of English manufacture are in use in several localities.

MINING AND OTHER MACHINERY NEEDED.

Very little progress has been made in the mining industry, the most antiquated methods being in general use. The application of machinery or chemical processes is very rarely found. Mining machinery and appurtenances, properly introduced, will eventually meet with a big demand. Engines, pumps, boilers, cables, and belts are the things most needed. Agents of concerns manufacturing these should visit Tomsk, Krasnojarsk, and Irkutsk, the centers of this trade, and make inquiries as to necessities, customs, and financial conditions of

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the market. Competition in all these products is sharp, the dealers naturally buying where the best terms can be secured. A large number of the dredges now in use were shipped from Great Britain. In Krasnojarsk agents of a British factory are competing with those of the Putiloff works in St. Petersburg. The chief local competitors are two Russian concerns, which, however, buy the principal parts from foreign countries.

There is a demand for cables of medium weight. One firm running a large English commission house can handle cables of one-fourth, one-half, five-eighths, and three-fourths inch in diameter. Sheet iron, used chiefly in eastern Siberia, is supplied by English concerns. Oil presses and kindred machinery should find a ready market.

SAWS AND CARPENTERS' TOOLS.

In Barnaul, Krasnojarsk, New-Nikolajewsk, and Irkutsk there is a a demand for saws of all kinds. The Sheffield products, usually considered the best, are placed on the market in great numbers in spite of the opinion that they are too expensive. The proprietor of a sawmill in New-Nikolajewsk reports that the English saws can not withstand the extreme cold, often 30° or 40° below zero. German saws, however, made to withstand extremes of cold are more satisfactory. English band saws range in prices from $3 to $44, according to diameter (12 to 44 inches).

Tools of all kinds for all trades find a ready market, especially those used by carpenters and turners. Germany has the bulk of this trade, England sharing a small portion of the remainder. There is room here for considerable extension if properly handled.

Soaps, perfumeries, and bluing are supplied mainly by several Moscow firms which affect French names. This trade is considerable and will bear watching.

VALUE OF MARKET UNDERRATED.

Mr. Cooke is of the opinion that English manufacturers consider the market too small to warrant the expenditure necessary to control it. He says, moreover, that the future of Siberia is very much underestimated by these firms and that the activity of several American firms who first ventured to introduce their wares, filling even the smallest orders, could well be emulated. The importer should not be expected to bear all the expense and risk, but should be met halfway by the manufacturer. If these firms can not at first ship the machinery to be sold on commission, they should certainly not make the terms as severe as has heretofore been the case. Otherwise the market will be lost to them entirely.

In concluding his report Mr. Cooke calls attention to the fact that he found a great many catalogues in Siberia printed in the English language. From an advertising viewpoint he considers these absolutely worthless. Instead of catalogues he advises the use of handbills and folders, which should be judiciously distributed by local agents. Furthermore, they must be printed in the native language, and contain an illustration and brief description of the article to be introduced. Finally, manufacturers are urged to study the financial and commercial conditions of the market by making personal investigation of the country.

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COAL IN SPITZBERGEN.

According to Export, a German publication, coal mining has been commenced at Advents Bay, on the west coast of Spitzbergen. The discovery of coal is one of the results achieved by the Swedish expedition sent out to study the geology of Spitzbergen. Two expeditions for mining coal were fitted out, partly in Norway, with English and American capital. About 200 tons of coal were mined this summer, of which 90 tons were taken by a Spitzbergen whaling company. The coal burns well, but is liable to loss from weather changes, which would prevent its being stored in the open for any length of time.

The expense of mining is considerable, as it must include strong bulwarks for protection against ice. Freights are high, as ships desiring to carry coal must go in ballast to Spitzbergen. However, the whaling and tourist ships which visit Spitzbergen should get coal here. The English party will stay at Spitzbergen this winter, but the American expedition will return to Norway. Next year the American company will continue its work into the winter. It may be mentioned that a cryolith mine has been in operation for some time at Iwigtut, Greenland.

SPAIN.

TOURISTS INVITED.

OFFICIAL ENCOURAGEMENT FOR FOREIGN TRAVELERS.

The Department of State has received from the American legation at Madrid a copy of a decree promulgated by the Spanish Government intended to encourage foreigners to visit and travel in Spain. Following is the decree:

1. A national commission is herewith created, charged with encouraging in Spain, by whatever means are at its disposal, the visit of foreigners, either those coming for pleasure or improvement.

2. This commission will be presided over by the minister of fomento, and will be composed of members to be designated by him.

3. Among the adequate means for encouraging the influx of foreign travelers to the study of and establishment of which the national commission named in the preceding article will at once begin to devote itself will be the following:

(*a*) Preparing and publishing in foreign countries itineraries for travel, in order that the chief national and artistic monuments, landscapes, etc., may be visited most easily and profitably.

(*b*) To study means and take the proper steps with the railway companies in order to organize and establish special tariffs and fast comfortable trains, which, starting from the frontier and, if possible, from the sea ports as well, may convey travelers on these tours, making the journey attractive and comfortable.

(*c*) In concert with deputations, town councils, or other bodies as may be expedient, to see that an improvement be arrived at in the lodging and services of all kinds relating to travelers, and when it may be done legitimately to attract and retain the subjects of other nations.

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(*d*) To publish and diffuse in foreign countries, in the appropriate language, historical facts, descriptions of our monnments, and whatever may be considered useful for the better appreciation of beauties, artistic as well as natural, and for giving a knowledge of our history and for awakening the curiosity of foreigners.

(*e*) Whatever other work or steps to be taken which, in the judgment of the above-named commission, and with the approbation of the Government if such be necessary, will be considered as contributing to the design of favoring the coming into Spain of the foreign traveling public.

OLIVE CROP.

SHORTAGE GENERALLY EXPECTED.

Consul Bartleman, of Seville, in response to instructions, supplements a recent report on the olive crop of Spain. He states that it is too early to give an estimate of the crop of 1905, but expresses the opinion that it will be very short. He says:

The gathering of queen olives will be over in a few days, and it may be already affirmed that the crop will not reach 50,000 fanegas, and the sizes 70/80 and 80/90 will be scarce. The quality is poor, because there is a lot of damaged and spotted fruit, and there may not be more than 40,000 fanegas of first class for export. Prices are 50 to 60 per cent higher than last year.

There are fair prospects for fine manzanilla, but the persistent dry weather has interfered with the development of the larger sizes. The fruit which is being gathered is so small that it takes 100 fruits per kilo more this year than last. The situation is further aggravated by the fact that this year 20 per cent more has been paid for fine manzanilla than last year.

Through stress of circumstances several packers have this year bought ordinary manzanilla, which fruit has not been cured for some years back.

Large purchases have been made of morons, and therefore the stock this year will be much larger than in the previous one. It is said the total crop this year will be much less than half of that of last year, which was a little better than an average crop.

GOATSKINS.

Consul-General Ridgely, of Barcelona, after investigating the commerce of goatskins in his vicinity, furnishes the following facts:

The principal markets for Spanish goatskins are found in France and Germany, the skins being exported from here to Marseille and Hamburg, where they are marketed.

The provinces of Cataluna are those which produce the largest quantity of goatskins, between 2,000 and 3,000 being handled daily in Barcelona.

These skins pay no export duty, but none the less in recent years prices are increasing. The present price list is as follows:

Goatskins:	Per dozen.
First quality, males	$12.56
Females	$10.00 to 11.60
Kid skins	3.10 to 3.50

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The most important dealers here are Miguel Bravo, 413, Calle Valencia; Casa Boqui, almacen de pieles, Plaza Barceloneta, and Jaime Hugas y Comas, Marina, 301, Fuerte Pio.

Any correspondence with these people should be in Spanish.

SWITZERLAND.

THE CHOCOLATE TRADE.

INCREASE IN ACREAGE—VALUE OF FOREIGN TRADE.

According to last year's report of the Chamber of Commerce of Zurich, Switzerland, the cacao trade of the world had a normal year. An increase in the acreage was recorded in Cuba, Brazil, and other countries, land being taken from tobacco to be put under the cacao bean. There is a constant demand for raw material that prevents the accumulation of stock.

The exports in 1904 of Swiss chocolates were 14,918,000 pounds, worth $5,179,368, against 13,033,460 pounds, valued at $4,322,043, in 1903.

The average value was $0.772 per kilo (2.2 pounds). Great Britain and her colonies took nearly half of the exports, $2,123,000. The United States took $579,000. After these Germany, France, Italy, and Belgium follow in the order named. Switzerland consumes about 10,000,000 francs worth per annum. Most of the Swiss factories give a good deal of attention to the export trade. They find that it pays.

BALANCE OF TRADE.

Few countries are seemingly so badly situated for foreign commerce as is Switzerland, and yet its foreign trade reaches sums that are surprising. In 1889 it imported goods to the amount of 885,000,000 francs and exported 695,516,000 francs; in 1904 the imports reached goods to the amount of 1,240,000,000 francs and the exports 891,479,000. When it is remembered that the Swiss Republic has only 15,976 square miles and 3,315,443 inhabitants, the figures of its foreign trade take on phenomenal proportions. The huge balance against the little Republic is more than made up for by the enormous amounts of money spent in Switzerland by tourists, by invalids who remain there practically all the year round, and by foreigners in Swiss schools.

NORWAY.

COMMERCE IN ALCOHOL.

STRINGENT GOVERNMENT REGULATION AND SMALL CONSUMPTION.

Consul Rasmusen, of Stavanger, tells of the stringent measures employed by the Government of Norway in the regulation of the alcohol trade. Whereas the annual consumption of alcohol in France is 12.57 liters, in Germany 9.25 liters, and in England 8.17 liters, it

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is but 2.66 liters in Norway. The Government determines the number of retail liquor "samlags" (saloons) that may be established in a given city. It also appropriates 65 per cent of the net earnings of the business and provides that of the 35 per cent remaining 15 per cent is to go to the city, 10 per cent to the county, and 10 per cent, or an amount not to exceed 5 per cent on the investment, to the samlag. Consul Rasmusen says:

The laws regulating the sale and dispensation of spirits and alcoholic drinks are very strict in Norway, and a comparison of statistics showing the yearly comsumption per capita in the different countries of Europe shows the percentage in Norway to be very low. The yearly consumption of alcohol per capita in Finland is 1.84 liters; in Norway it is 2.66; in Sweden 4.43; Russia, 5.21; Holland, 6.30; Austria, 7.99; Great Britain, 8.17; Servia, 8.46; Germany, 9.25; Roumania, 9.74; Portugal, 10.10; Italy, 10.30; Switzerland, 10.73; Denmark, 10.87; Spain, 12.05; Belgium, 12.58, and in France 12.57.

LOCAL OPTION AND DIVISION OF PROFITS.

The laws in Norway provide that the sale and dispensation of spirits in incorporated cities and towns in smaller quantities than 250 liters is permitted only through what is known as a "samlag," which is an association formed for the purpose of retailing liquors and according to the manner prescribed by law and must be approved by the municipal authorities and sanctioned by the Government. Application for permission to operate a samlag must be submitted to the voters at a general election, and must receive a majority of votes. The result of such election is binding for six years. The city council may grant a samlag permission to operate as many places as the size of the city requires, but the books and accounts of the samlag is audited by a committee selected by the Government and municipality jointly and the net earnings are divided as follows: To the Government, 65 per cent; to the municipality, 15 per cent; to the samlag, 10 per cent; to the county, 10 per cent; with the proviso that the share going to the county shall be gradually diminished by 8, 6, 4, and 2 per cent during the six years, and the earnings of the samlag correspondingly increased; but the shareholders shall not receive in any one year more than 5 per cent on the capital invested. Sale of liquors is prohibited from 10 o'clock p. m. to 8 o'clock a. m., and after 1 o'clock on days preceding Sundays and holidays, as well as on these days.

Under the operation of a samlag in the city of Egersund, with a population of 3,500, the following result is shown: The net earnings of the samlag for the year having been $5,736.19, divided as follows—

Government, 65 per cent	$3,727.54
Municipality, 15 per cent	861.42
Samlag, 10 per cent	573.62
County, 10 per cent	573.62
Total	5,736.20

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GREECE.

COMMERCIAL ACTIVITY.

INCREASE IN RAW COTTON—ACTIVITY OF HOME MILLS.

Secretary Wilson, of the legation at Athens, furnishes the following table showing the imports into Greece in the years 1896 and 1904 of raw cotton, wool, and tissue, which are far from supplying the needs of the country:

Articles.	1896.	1904.
	Francs.	*Francs.*
Raw cotton	1,380,800	1,989,300
Unbleached cotton	786,400	975,200
Sewing cotton	313,400	256,800
Unbleached tissues	1,424,600	1,157,700
Bleached tissues	3,805,800	3,997,700
Dyed tissues	690,200	1,355,700
Linings	140,300	764,300
Textile fabrics	7,269,600	4,432,000
Medicines and chemicals	5,332,000	6,800,000
Worked metals	3,411,200	7,800,000
Various articles	13,500,000	19,000,000

The increase in the amount of raw cotton imported from the United States, Egypt, and India shows that the Greek cotton mills are increasing their output, but the importation is still large, and if the value of textile fabrics has decreased it is rather due to lowering of prices than to reduction in quantity, which was 604,400 okes (2.84 pounds) in 1896 and 635,500 okes in 1904. The importation of worked metals and various manufactured objects has increased decidedly. Briefly, the industrial situation in Greece shows but little change since 1896, but it is likely that the lowering of the rate of exchange will have the effect of bringing into the country foreign companies which will be serious competitors of the Greek concerns.

DECREASE IN TRADE WITH THE UNITED STATES.

For the fiscal year ending June 30, 1905, the commerce between Greece and the United States amounted to $1,270,683, which is $300,000 less than for the preceding year. This decrease is caused principally by the falling off in the amount of dried currants sent to America and also to the fact that last year the Greek Government obtained its petroleum from Russia. Mr. Wilson writes:

The most important exports from Greece to the United States are olives, olive stones for soap, cheese, sponges. The exportation of wines has decreased. The value of Greek goods imported into the United States was $583,291 in 1903, $591,516 in 1904, and $509,394 in 1905. The consul-general thinks that these figures are not a true estimate on account of lack of direct communication between the two countries, and that both exports and imports are larger than they appear in his report. American goods imported into Greece were

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valued in 1903 at $380,844, in 1904 at $242,229, and in 1905 at $181,970. The decrease in 1905 is due to the petroleum having been replaced by the Russian article. The Greek Government has again begun to purchase its petroleum in America. A cargo of 80,000 cases has been received from Philadelphia.

INDUSTRIAL NOTES.

The following industrial notes deal with the imports and exports and various industrial movements in Greece:

Out of the total exportation from Greece of 91,300,000 francs in 1904, agricultural products—dried currants, wine, oil, olives, etc.—represented 62,000,000, and minerals and crude metals 19,000,000, which shows that manufacturing in Greece is only a small local industry. On the other hand, Greece imported in 1904 yarns, tissues, worked metals, medicines, and chemicals to the value of about 60,000,000 francs, showing that the local manufacturers can not supply the needs of the country.

The Greek Electric Company, grantee of the Thomson-Houston patents, is interested in all electric lighting and traction enterprises in Greece. It owns electric stations in Athens and Piraeus, and has given concessions for the lighting of Syra, Patras, Argostoli, Chalcis, etc. Its stock of 100 drachmas par value was worth 132 drachmas in December, 1904. * * * The Société Générale d'Entreprise undertakes all sorts of public works and the exploitation of mines. It was this company which constructed the Corinth Canal, and it is now working the sulphur mines at Milo.

The Basiliades shops at Piræus builds steamers, and even locomotives, but all the iron used is imported.

The Société Vinicole et d'Industrie owns a large property near Athens, where grapes and tobacco principally are cultivated. In factories on the premises wines and liquors are distilled and cigarettes made. The other Greek industrial enterprises are relatively unimportant.

Besides the above-mentioned companies, there are also in Greece a certain number of factories of spinning, weaving, chemical products, etc., situated in Athens, Piræus, Patras, Syra, Corfu, and Livadia. In this latter place is woven the cotton coming from the Lake Copais district.

ACETYLENE.

ANCIENT CITIES SUPPLIED WITH THE NEW LIGHT.

Consul Horton, of Athens, reports that a number of Greek cities have issued franchises to a company to supply them with acetylene gas light. Oil lamps had been used hitherto. They are to pay 6.8 mills for every 22-candlepower light, while private parties get the light at 1 cent per 22 candlepower per hour. He writes:

A local company has secured the rights for lighting three Greek towns with acetylene gas. Hitherto all the cities of Greece, with the exception of Athens, Piraeus, and Argostoli, Ionian Islands, have been ineffectually lighted by oil lamps, the oil costing here 19 cents per kilogram. There has been much complaint among the inhabitants of these

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towns, and they are in general ready for a more efficient system of illumination. Mr. George Cyprianos, of the Société Hellénique d'Eclairage par le Gas Acétiline, has given me some interesting figures bearing on the subject. He thinks that, perhaps, American firms might be induced to cooperate in the extension of this work. The charter is secured from the nomarch and the demarch, or mayor. The three cities already secured by the company are Nauplia, Levkas, and Arta, and work has begun on the two first mentioned. Here are Mr. Cypriano's figures, in part:

COST OF LIGHT.

Carbide of calcium (carbure de calcium) costs in Greece by the box of 50 kilograms $4.25. Each kilogram produces 300 liters of gas; a 22-candlepower jet consumes in one hour 15 litres, which, if calcium carbide cost 8½ cents per kilogram, results in an expense of .00425 cent per hour.

The municipalities with which contracts have been signed are to pay .0068 cent the hour, but it is expected that the profits of the enterprise will be realized chiefly from private consumers. The working expenses for each municipality are as follows:

Engineer per month	$34.00
Assistant per month	13.60
Collector per month	17.00
Two lamplighters per month	10.20
Various expenses	3.40
Total	78.20

Private individuals will be charged about 1 cent the hour for each light. The following table gives an approximate idea of the population of several of the smaller towns of Greece, with the number of public and private lights of 22 candlepower each:

City.	Population.	Public lights.	Private lights.
Nauplia	5,800	165	800
Levkas	5,800	125	800
Aegion	16,000	200	800
Aegina	6,000	100	500
Arta	7,500	90	500
Corinth	4,200	100	500

The duty on calcium carbide (carbure de calcium) is 0.085 cent for the case of 50 kilograms.

Consul Horton, of Athens, Greece, writes that in a report recently submitted to the ministry of finances, Vinzenzo Pepe, an Italian expert coral fisher, gives the results of his three years' search for coral in Greek waters. Signor Pepe was employed by the Greek Government but, the appropriation being exhausted, his labors have temporarily come to an end. According to his report the waters about the islands of Cephalonia, Leukas Cerigo, etc., are most richly supplied with coral, while along the shores of the Peloponnesus very little was found.

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BULGARIA.

SATISFACTORY AND STEADILY INCREASING TRADE.

Mr. Charles S. Wilson, secretary of legation, writes that the imports of Bulgaria in 1904 were 47,886,996 francs larger than in 1903, an advance of 54.84 per cent, and that the exports were 49,545,275 francs larger than in 1903, or 45.84 per cent. These figures indicate a satisfactory degree of progress, and it is more than probable that they stand for increased prosperity. The report follows:

In spite of the unsettled conditions existing in Bulgaria the last year, trade seems to be in a flourishing condition, and the foreign commerce, both as to exports and imports, is the largest in the history of the country. The following are the official figures for the last three years:

	1904.	1903.	1802.
	Francs.	*Francs.*	*Francs.*
Imports	129,689,577	81,802,581	71,246,492
Exports	157,618,914	108,073,639	103,684,580
Total	287,308,491	189,876,220	174,931,022

The increase of imports in 1904 over the preceding year amounts to 47,886,996 francs, or 54.84 per cent, in which all countries have shared. Of this increase arms and ammunition amounted to 7,214,823 francs, which represents nearly the entire increase from France, while the large total increase is only due slightly to the increase in military forces of the principality. The chief increase has been, textiles, 13,573,503 francs; soft goods, not named, 7,338,200 francs; machines and instruments, 7,327,020 francs; skins and skin products, 4,037,164 francs; metal goods, 2,070,486 francs; live animals, 1,542,334 francs; paper goods, 787,107 francs.

As to exports, the increase of 1904 over 1903 has been 49,545,275 francs, or 45.84 per cent. Belgium easily stands first in this list; but it is probable that a considerable portion of the exports to that country—which have more than doubled in the last year, while the imports from Belgium have increased but slightly—find their way to England. The principal increase in exports is as follows: Grain, 47,988,879 francs; animal food products, 2,573,679 francs; live animals, 1,033,266 francs. Tobacco, perfumes, and fruits have decreased in amount.

SHARE OF DIFFERENT COUNTRIES.

The values of the imports and exports of Bulgaria during 1904 in relation to different countries are shown in the following table:

Country.	Imports.	Exports.	Country.	Imports.	Exports.
	Francs.	*Francs.*		*Francs.*	*Francs.*
Austria-Hungary	38,169,314	14,089,760	Servia	1,100,597	1,745,526
United Kingdom	18,849,294	24,728,174	Turkey	17,025,465	25,645,209
Belgium	2,496,520	52,987,552	France	10,697,270	7,605,950
Germany	19,976,482	12,216,031	Holland	627,054	275,569
Greece	337,759	3,730,815	Switzerland	965,492	219,820
Italy	8,318,730	4,762,167	Sweden and Norway	176,525	322
Roumania	3,712,018	1,755,624	Other countries	588,335	3,422,657
Russia	6,075,433	142,252	Undetermined		3,776,087
United States	577,289	515,373			

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In this connection it is interesting to note that of the exports to Belgium, amounting to 52,987,552 francs, more than twice the amount credited to any other country, eggs amount to 118,780 francs; wheat, 42,719,595 francs; rye, 1,471,226 francs; oats, 3,278,372 francs; barley, 2,413,527 francs, and maize, 2,314,491 francs. In wheat alone there was an increase of 22,000,000 francs.

A group of English financiers recently visited Sofia and had meetings with the Bulgarian minister of finance to discuss the foundation of an Anglo-Bulgarian bank. It is understood that the Bulgarian Government promised to do all that was possible to facilitate the establishment of such a bank.

Minister Hill, of The Hague, informs the Department of State, September 30, 1905, that by royal order, published September 23, Zaponiak required in the varnishing of metal articles is, under certain conditions, exempted from import duty.

Consul Dunlap, of Cologne, forwards a letter from the owner of an ivory and majolica factory near Coblenz, Germany, calling attention to the large quantity of beer mugs with lead covers exported from that consular district to the United States. The laws of Germany, writes Mr. Dunlap's correspondent, forbid the manufacture and sale of such mugs, as lead is considered injurious to health, and in the interest of public health in the United States their importation should be forbidden, or at least the materials from which the covers are made should be stated in consular invoices.

Consul Dunning, of Milan, Italy, has frequently called attention to the work, going on all over Italy, of converting horse-car railways into electric roads or of opening up new roads made possible by the presence of electrical power generated by the waters in Italy's hills. In this connection it is time to urge American manufacturers to make haste in investigating every field in the world where work of this kind is going on. The fact that American mannfacturers are producing some of the best types of railroad materials; that American railways are accepted as models in many parts of the world, both as to materials used and methods of running, would seem to justify a movement to secure sales in Italy and other progressive parts of Europe and the Orient.

The Export Verein of Prague calls attention of Austrian exporters to the increased demand for many classes of goods in Russia and the opportunity offered to secure a firm footing in the trade of that country. Prompt action on the part of exporters is urged, as competition is sure to soon arise. Among the articles in which a demand is said to exist are good leather, especially kid and chrome leather, fine footwear, brass and bronze wares, trimmings and haberdashery, neckwear, silks, foulards, hardware, ironware, cheap jewelry, purses, cutlery, cuff buttons, linen buttons mounted on brass, fans, fine laces (Valenciennes à la Calais), ribbons, watch chains, metal buckles for girdles or belts, metal bags, canes (mostly of natural wood), stationery, penholders, pens, fine paper, knitted wool gloves, socks, stockings, majolica ware, and various other articles.

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ORIENT.

CHINESE EMPIRE.

EXTENDING TRADE IN COTTON YARN.

MARKET DOMINATED BY INDIA—QUALITIES AND PRICES DESCRIBED—AN OPEN FIELD FOR AMERICANS.

The cotton-yarn trade in China is made the subject of a report by Special Agent Burrill. Attention is called to the trade in cotton yarn established by Japan. It is explained that the Chinese are growing some cotton and converting it into yarn. Various grades and qualities of yarns and relative prices are furnished. Mr. Burrill suggests that American manufacturers might enter the Chinese market, although they could not expect to realize as large profits as their competitors of India and Japan, because of the greater freight rates on the American product. A sample of cotton yarn made by the Chinese from the native product is furnished by Mr. Burrill, which is on file in the Bureau of Manufactures, and will be held for inspection of American manufactures. The report is dated Shanghai September 28:

The importation of cotton yarn into Shanghai for distribution in central and northern China has made rapid progress since 1892, when it first attracted statistical notice, and it is reasonable to assume, because of the steadily increasing demand among the poorer classes for this material from which they manufacture their own wearing apparel, that its growth will continue steadily to develop. In this market there are now represented the Indian, Japanese, English, and Chinese yarns, but apparently no systematic effort has ever been made to introduce cotton yarn of American manufacture. This lack of representation in a market where the demand has been constantly increasing during the last fifteen years may be ascribed as much probably to the absence of explicit information regarding conditions and the possibility for the introduction of American yarn as to the impression that it would be difficult to lay down the product in Shanghai at a price which would enable our manufacturers to compete with India and Japan and still make a margin of profit that would justify them in entering the field.

In this report I shall call attention briefly to the trade built up by India and Japan, giving descriptions of the yarn in greatest demand in northern and central China, prices, and present other details which should enable the American manufacturer to determine whether he can export cotton yarn to this market at a profit. If the cost of transportation, added to the cost of manufacture, will permit of even a very small percentage of profit, the experiment should be made, for if the Chinese find the American yarn superior to those to which they are now accustomed, and if the price appeals to them, even though it be a fraction higher than they are now paying, an enormous business

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can be rapidly developed. The Chinese prefer goods manufactured in the United States because of their better quality, but the price must conform to their purchasing power, and the amount they are able to expend is indicated by the price paid for the yarns now in use.

In almost every Chinese home inhabited by the poorer classes may be found the primitive wooden loom upon which the natives weave their own cloth for wearing apparel. They of course buy in small quantities from the Chinese merchant, but in the aggregate the sale of yarn for this purpose is of enormous proportions, and these humble toilers are almost as quick to recognize a superior article as are the dealers, and if the price be within their reach a market is soon established and its permanency assured.

CONSUMPTION OF YARN.

In 1892 the value of Japanese cotton yarn imported into Shanghai amounted to haikwan taels 1,760, or approximately $1,260, figured at an arbitrary rate established by the imperial maritime customs. The Indian yarn imported in 1892 was valued at about haikwan taels 9,000,000, approximating $6,430,000. For the year 1904, the latest official returns available, show an importation of 493,635 piculs (133⅓ pounds to a picul) of Japanese yarn, amounting to haikwan taels 12,143,421, or about $8,670,000. India exported to Shanghai in 1904 934,653 piculs, valued at haikwan taels 23,740,186, or $1,700,000 in round numbers. The exports of Great Britain to this port in 1904 amounted to 6,208 piculs, valued at haikwan taels 239,006, or approximately $171,000 in American money. In addition to this there are in Shanghai alone 9 cotton-yarn mills with a total of approximately 300,000 spindles. Each mill is capable of averaging 240,000 pounds in 24 hours, and of the 9 mills 6 are running 23½ hours a day, and 3 only close for the night. In Hangchow, 150 miles from Shanghai by water, there is another large cotton mill operating 24 hours a day, and disposing of its entire output without difficulty.

The Chinese mills are part foreign and part native owned, employing Chinese operatives at an average of 20 cents Mexican (10 cents gold) a day each, but all are under foreign supervision. English machinery is used almost exclusively. Approximately 50 per cent of the Chinese yarn is consumed in Shanghai and the immediate neighborhood; 35 per cent is disposed of in the interior, and the remaining 15 per cent is used here for the manufacture of sheetings and drills, although they are, of course, of an inferior quality, not in any way competing with the American cotton goods on the market. In the manufacture of Chinese cotton yarn native cotton is generally made use of, and the supply meets the demand. Indian cotton is occasionally mixed with the native product when it can be easily obtained and at a low price. The cotton grown in China is of exceedingly poor quality as compared with the American crop. Lack of cultivation and carelessness of handling are producing a shorter staple every year, while the cotton is yellow in color, dirty, and generally unfit for the manufacture of high-grade yarns.

ORIGIN AND GRADES OF RAW MATERIAL.

The Indian yarn imported for this market is manufactured largely from Indian cotton, although when mixed with American cotton it

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produces a yarn that is better liked by the Chinese consumer because of its greater strength. The Japanese yarn is usually made of a mixture of Indian and Chinese cotton, although of late American cotton has been used and, as is the case with the Indian yarn, produces a far better article. English yarn is manufactured largely from American cotton imported from the United States, made into yarn in English mills, and laid down in Shanghai at a price which enables it to compete with the Indian, Japanese, and Chinese manufacturers.

There are five important grades of Indian cotton yarn imported into China, which, by reason of their price, have gained popularity among the natives of the interior. They are 6s, which form 5 per cent of the total imports; 10s, forming 45 per cent of the total imports; 12s, forming 10 per cent of the total imports; 16s, forming 10 per cent of the total imports, and 20s, forming 30 per cent of the total imports. The 6s are chiefly exported from Shanghai to Niuchwang, the 10s go to Tientsin and Niuchwang, the 12s and 16s to the river ports of the interior, and the 20s to Szechuen. Of the Japanese yarns the 16s and 20s are the grades most popular in China, and because of their superior finish and heavier weight sell about Shanghai taels 10 ($6.25, approximately, in American money) a bale higher than the Indian yarns. These yarns are also whiter than the Indian yarn, and are purchased freely all over China with the exception of Szechuen, where they are in least demand. The heaviest business in Japanese yarns is transacted in Chefoo, Niuchwang, Tientsin, and the river ports.

BUSINESS INCREASING.

While English yarns are sold all over China, the business is comparatively unimportant, as indicated by the value of the importations. The main difficulty seems to be the price, which, to the Chinese consumer, is excessive as compared with other yarns, and for their purposes it produces no more satisfactory cloth than its cheaper competitors. They are chiefly of smaller sizes—24s, 30s, and 34s—and although the English manufacturers have striven for years to popularize and obtain for them a ready sale in this market their efforts have met with poor success. The business in Chinese yarns is increasing daily, although their cost to the consumer is approximately the same as that of the Japanese. This is explainable by the desire of the Chinese to patronize home industries, even though the quality of the goods be inferior, with the price practically the same. Their sizes are confined chiefly to 16s and 20s, although 14s are gaining in popularity in Szechuen, and lately there have been some 12s introduced.

EXPLANATION OF SIZES.

In explaining the various sizes, I have selected and transmit herewith a sample of Japanese cotton yarn which runs 40 bundles to a bale. Each bundle is divided into 16 counts or sizes from which "16s" derives its name. (This applies also to the 6s, 10s, 12s, 14s, 20s, 24s, etc.) Each count is divided into 10 smaller ones, which are again divided into 7, and in each 7 there are 80 threads. They are put up in skeins of 1½ yards. In one count there are 8,400 yards. The tie separating the skeins is made up of one blue and two white threads, while the bundle is securely tied by four bands of white yarn, under which is the "chop" or trade-

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mark. The bundle is then inclosed in strong brown paper on which is placed another "chop," and it is then tied up in readiness for the bale. The same measurements and methods apply to Indian and English yarns.

Formerly one bundle was supposed to weigh 10 pounds, but recently a disposition has manifested itself slightly to increase the weight, and to this the Chinese consumer does not object. One reason is that the first time a new chop is introduced into the market it has been made a little heavier in order to give it added value in native eyes, and the result has been that manufacturers having older chops in the market have been compelled to follow the lead, so that now bundles will average 10¼ pounds. The Japanese, after spinning, apply steam, which increases the weight of a 10-pound package approximately one-quarter of a pound. It has the additional advantage of making the yarn softer, less brittle, and more saleable. It can not, however, be kept over three months after steaming. It is pointed out that in the event of the introduction of American cotton yarn into this market no such expedient would be necessary to insure its popularity. With the longer staple of American cotton the yarn would be softer and less liable to break and would weigh up about 10½ pounds of pure yarn to the bundle as against 10¼ pounds of Japanese yarn, which would include one-quarter of a pound of moisture. The Chinese are quick to recognize merit, and such a condition would instantly appeal to them.

RECEIPTS FROM INDIAN MILLS.

The profits of the Indian mills in the export trade to Shanghai during the last two years are conservatively estimated by those in close touch with the situation at from $5.50 to $6 (gold) per bale, and the mills have forward contracts up to September, 1906. As their business is approaching the million mark annually, the value of the industry is such as to point to the advisability of an investigation by an American cotton-yarn expert of the conditions in detail with the view to determining whether it is not possible to compete in price. The quality of yarn manufactured in the United States is unquestionably superior to that produced in India, Japan, or China, and with the cost practically the same to the consumer here it would be only a question of time when the control of the market would pass into American hands. The Indian yarn costs at the factory 30 per cent less than the selling price, the Japanese 20 per cent less than the selling price, the English 15 to 20 per cent less than the selling price, and the Chinese 10 per cent less than the selling price.

AVERAGE PRICES.

The costs of yarns laid down here can not, of course, be given accurately, for they are always subject to the fluctuations of exchange and the general law of supply and demand. The following must, therefore, be regarded as more of average than actual quotations, but they will enable the American manufacturer to estimate with fairly reasonable accuracy the range of prices now prevailing.

Indian:	Shanghai taels.	Gold dollars.
10s	78 to 85	=48.75 to 53.12
12s	80 to 86	=50.00 to 53.75
16s	85 to 92	=53.12 to 57.50
20s	90 to 99	=56.25 to 61.87

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	Shanghai taels.	Gold dollars.
Japanese:		
16s	99 to 102	61.87 to 63.75
20s	107 to 110	66.87 to 68.75
English:		
24s	120	75.00
30s	130	81.25
32s	130	81.25
34s	140	87.50
Chinese:		
12s	83 to 86	51.87 to 53.75
14s	84 to 89	52.50 to 55.62
16s	90 to 96	56.25 to 60.00
20s	100 to 104	62.50 to 65.00

The above prices in United States money are figured at 62½ cents as the rate of exchange and include freight, insurance, customs duties, and all other charges.

CUSTOMS DUTIES AND TRANSPORTATION.

The customs duty on cotton yarn is shanghai taels 3.1749 ($1.99 approximately in American money figured at an exchange rate of 62½ cents), or haikwan taels 2.85 ($2.04 at an arbitrary rate of 1 haikwan tael amounting to $1.40 gold). These duties, while subject to the fluctuations of exchange on which are based the arbitrary rate established by the imperial maritime customs, vary but little, and no increase is contemplated.

The cotton yarn business is transacted here through commission houses in such a manner as to reduce to a minimum the possibility of loss to the manufacturer. In the sales of "spot" cargo, delivery is made two weeks after sale, although the Chinese frequently keep yarn uncleared for a month. Payment is made in five-day bank orders, which are regarded as good as gold. Goods are also contracted for by wire, but these are all at the risk of the Chinese merchant, who pays for storage and duty and settles exchange on his own account. The bulk of the transactions are, however, in spot cargo, which may be briefly described as stock in hand.

The transportation of cotton yarn from Shanghai to the interior does not in the slightest concern the foreign manufacturer, as he sells at a price which includes expenses laid down in Shanghai and no further. The goods are then sold here to the native buyers, who, in taking possession, of course assume all costs incident to their removal. It may be said, however, that the facilities, in the absence of railroads, are fair for sending freight into the interior of central and northern China. It can be shipped by water or carried by coolies, either of which mode of transportation is available at a comparatively low cost. It is customary roughly to estimate the cost of shipment to Tientsin at Shanghai taels 10, or $6.25 gold, per bale and to river ports at Shanghai taels 5 ($3.12). Because of the distance, the rates to Szechuen are Shanghai taels 20 to 25 ($12.50 to $15.62) a bale.

PROPER PACKING.

The question of the proper packing of goods destined for the Chinese market is one that demands careful attention, for the reason that complaints are frequent that cargoes arrive in damaged condition because of improper or inadequate protection or both. This applies to

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a greater or less extent to all classes of goods exported from the United States to this port, and it is evident that the average American shipper fails to appreciate that packing that would carry freight safely by rail to any point in the United States, however distant from the factory, is practically useless under the wear and tear of transshipment by ocean steamship. The utmost care should be exercised with every kind and description of goods shipped to the Orient; and in this connection, in view of the possible exportation of American cotton yarn to this market, a brief description of the method of packing Indian, Japanese, and English yarns may be of value.

Both Indian and Japanese yarns are packed 40 bundles to a bale. The 10s with 20 hanks to a bundle, the 12s with 24, the 16s with 16, and the 20s with 20. The bales each weigh 300 piculs and measure 3 feet 3 inches in height and 2 feet 6 inches in width. They are tightly packed in gunny cloth and bound securely with four iron hoops. The English yarn is similarly though more substantially packed, for in addition to the gunny cloth they use a covering of tarpaulin, which is more expensive, but renders the goods waterproof. In shipping American cotton goods, E. I. Ezra, one of the leading yarn merchants of Shanghai, suggests that the Indian method of packing be followed, but discourages the use of tarpaulin because of the additional cost and the comparatively little danger to be apprehended from moisture. If it were not necessary to reduce the cost of laying down American cotton yarn in Shanghai to a minimum in order successfully to compete with the product of India, Japan, and China, it would of course be advisable to adopt every precaution, but under the circumstances he believes that this expense should be saved.

CHANCE FOR AMERICAN MANUFACTURERS.

Inasmuch as the Indian mills have been making a profit of at least $5.50 gold a bale on yarn exported to Shanghai over and above the expense of manufacture, freight rates, insurance, and wharf charges here, it is fair to assume that the American manufacturer can enter the market, although at a much smaller margin of profit because of the greater freight rates. If yarn from the United States can be introduced here at a price permitting of a small, though safe, margin for the manufacturer, and that will still be sufficiently low to compete with India and Japan, a great industry might be built up. If after full investigation of the cost of production, handling, and transportation an American yarn manufacturer is convinced that he can meet the prices now obtaining here, a great field is open to him, one which, if carefully cultivated along American lines, would unquestionably lead to the establishment of a permanent and constantly increasing market for his product.

The experiment has never been tried, and possibly the beginning should be made in a small way. Suppose the manufacturer satisfied himself that he could lay down his goods here as cheaply as can the Indian manufacturer, would it not be worth while to ship over to a responsible dealer a small consignment—for instance, of 16s and 20s? It would certainly be to this dealer's interest to push the American yarn to the utmost with a view to creating a market and establishing a permanent and paying connection. One firm has expressed its desire to make the trial, and its standing is such as to guarantee a strong and conscientious effort to introduce the American yarn in the Shanghai market.

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SEWING MACHINES.

RECOGNIZED SUPERIORITY OF AMERICAN MACHINES—OBJECT LESSON FOR AMERICAN MANUFACTURERS.

Special Agent Burrill furnishes from Shanghai a report on the sewing-machine trade in China. While the assurance that this trade is practically in the hands of United States manufacturers is gratifying, the information which Mr. Burrill furnishes regarding the success that has attended the push and enterprise of the company whose machines dominate China should be an encouragement and incentive to manufacturers in other lines of industry. Another important fact pointed out in the report is that manufacturers must maintain the standard of their products and make them conform in every particular to the wants as well as to the taste and desire of the Chinese. Mr. Burrill's letter follows:

The United States controls practically the entire sewing-machine market in China. The bulk of the trade is in the hands of the Singer Sewing Machine Company, which established a branch in Shanghai about four years ago. The "New Home," "Domestic," and "Standard" sewing machines, all of American manufacture, are also represented in this market through commission houses, but their sales are limited, which may be attributed more to a lack of effort to properly introduce them than to inferiority to other makes in style, finish, durability, or work turned out.

In central and northern China a few German sewing machines are imported through commission houses, but although their prices are from 30 to 50 per cent lower than those of the American machine, customs returns indicate that their sales constitute not over one-tenth of the business transacted. A determined effort has recently been made to introduce machines of Japanese manufacture but with poor success, and it is apparent that machines made in Japan are regarded by the Chinese much the same as are the German machines, in that, although the initial cost be less than that of the American machine, they are more expensive and less satisfactory in the end, because of cheap construction and poor workmanship. One illustration of the methods employed by the Japanese to introduce sewing machines of their manufacture may be of interest. During the American boycott circulars were issued and distributed broadcast in Hankau (the Chicago of China) urging the Chinese not only to discontinue the purchase of American machines, but to substitute those of Japanese make for the machines then in use. The effort was a failure, but it indicated to even the most casual observer that if an attempt to dislodge the American sewing machine at a time when the movement against goods manufactured in the United States was at its height was unsuccessful, the American machines are firmly established and are in the market to stay.

AN EXAMPLE FOR AMERICAN MANUFACTURERS.

The business of the Singer Sewing Machine Company has made enormous strides in the past three years. In 1902 this company had

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not a single machine on lease to the Chinese. At the present time they operate 50 depots throughout the Empire, of which 47 are under native supervision, and they have approximately 3,000 machines out on lease. They estimate their annual sales at about 5,000 machines, 50 per cent of which are sold on a cash basis, the remaining 50 per cent being leased out or sold on the installment plan. Their business has trebled in three years, and the Singer Sewing Machine Company representatives in central and northern China are confident that an increase fully as great if not greater will be shown in the sales for 1906, 1907, and 1908. In this connection it must be borne in mind that several of the provinces in the Empire are as yet untouched in this particular line of commercial endeavor, but the results already obtained are regarded as indicative of what may be accomplished when the field shall be extended. The business of this company, the Standard Oil Company, and the British-American Tobacco Company (Limited) shows what can be accomplished in China by organization, the liberal expenditure of money for the extension of trade in the interior by advancing commercial outposts into hitherto unexplored territory, and extended, though careful, use of Chinese newspapers for advertising purposes.

Representatives of the Singer Sewing Machine Company estimate that in another three years their company will have established 200 depots throughout China, and that 4 machines a month may be accepted as a fair average sale for every new town opened up. If these plans be carried out and the same energy is employed in the disposition of the product, it is safe to assume that the output in China of this company alone will then approximate 800 machines a month. While this increase may be regarded as assured, there are no indications anywhere in central or northern China that the sewing machines manufactured in any other country will cut into the American business to any appreciable extent. It is equally safe to assume that no one business enterprise, be it American, British, German, French, or Japanese, can monopolize the Chinese market, provided the goods sent here to compete with those already established be pushed with the same energy and determination as were exhibited in the introduction of commodities that blazed the way to native consumption.

OLD-TIME PREJUDICE.

Sewing machines have been adopted principally by tailors and shoemakers, and it is worthy of note that there is no family trade. The reason for this is shown apparently in the disinclination of the wealthier Chinese, who can afford to purchase them, to permit their wives or daughters to make use of machines for the purposes intended. In these households machines are regarded more as a toy than as a serviceable article, and the question now is whether it will be possible for American business methods to overcome the prejudices of centuries and obtain finally a foothold for their wares in the home circle. It seems an almost impossible undertaking, but other innovations have been brought about which at first appeared almost if not quite as difficult, and if the wealthier class of natives can be educated along these lines a practically inexhaustible market may be opened up.

An effort is to be made in the near future to dispose of sewing machines to the Chinese Government. Under edicts recently issued the military have adopted a uniform half foreign and half native, and

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it is believed that still further concessions to comfort and utility will be made which will cause the army gradually to accustom itself to the foreign style of dress in its entirety. In order economically and expeditiously to manufacture these proposed new uniforms, representatives of the American companies believe that sewing machines will be introduced and that their work will be so satisfactory that large orders will result. Another use now made of the sewing machine is for the manufacture of a cheap leather shoe, which is gradually becoming popular among the natives. With a machine the Chinese shoemaker can do the work far easier and in considerably less time than by hand, and an increase in the demand for this purpose is confidently predicted. It is roughly estimated that the sales of the embroidery attachment, which has attained a marked degree of popularity among the Chinese, have reached 5,000 in the last three years, and as their usefulness is demonstrated in the interior, where they are being introduced as rapidly as possible, it is reasonable to assume that a constantly growing market will result.

SUPERIORITY OF AMERICAN MACHINES.

While the retail price of the American sewing machine is from 25 to 40 per cent more than that of the German make on this market, the Chinese evidently recognize the superiority of the former, for they are willing to pay the difference in order to secure the more satisfactory and durable article. This condition is, however, largely the result of American educational methods as applied to business, for when the Singer Sewing Machine Company first introduced their machines in China the natives would buy only the cheaper grades. Gradually they have been worked up to the idea that it is economy to purchase the more expensive machine, so that now the treadle or foot machine is being substituted for the cheaper hand machine and is giving excellent satisfaction. Attached hereto is a price list of the Singer Sewing Machine Company, but within a few months, in order to increase business among the natives, whose purchasing power must be taken into consideration, it is the intention to make a material reduction in the price of machines of all grades. In connection with the plan of lowering prices and still commanding a fair margin of profit, it is interesting to note that the Singer Sewing Machine Company, by reason of its most efficient organization and business methods, maintain their Shanghai branch at an expense of approximately 45 to 50 per cent per machine. In the outports and interior depots a smaller average is shown, depending of course on the amount of sales.

FREIGHT AND PACKING.

The three principal branches of the Singer Sewing Machine Company in China are at Shanghai, Tientsin, and Hongkong, and shipments are made direct to these points from the factories of the company. There is no appreciable difference in the freight rates from New York via Suez and from German ports. The overland rate is, however, practically double that of the rate of direct shipment from New York via Suez, and is consequently rarely used except in cases of emergency. It is estimated that the average cost

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of freight and handling a sewing machine from New York to Shanghai is $1.50 gold. The representatives of the company have made an arrangement with the customs authorities whereby a fixed average valuation for foot and hand machines has been adopted, and on this valuation a duty of 5 per cent is collected. The foregoing facts and figures regarding the Singer Sewing Machine Company are given because that company so dominates the trade in China as to give to them a fixed value of accuracy and reliability.

The method of packing sewing machines varies but little, and because of long experience is probably the best that could be devised. In this particular, machines differ from practically every other commodity exported from the United States to China. As a rule, machines are packed one to a case and in parts. The heads are wrapped securely in waterproof paper, and the whole is packed closely in straw. The heavier machines are packed in two cases, the head in one and the stand in the other. This method of packing singly facilitates examination by customs officials when goods are transshipped, and obviates the necessity of unpacking and repacking when an order for one machine is received from the interior. This it is desirable to avoid, for it necessitates a repacking permit from the customs, involving delay, trouble, and expense. The facilities for shipping to outports by steamer from Shanghai are excellent, but the only modes of transportation to the interior remote from the river steamers are the wheelbarrow, the carrying cooly, and the junk. These are all comparatively inexpensive, but slow and uncertain, and unless great care be exercised the article in transit may be damaged to a greater or less extent.

A PERMANENT FOOTHOLD.

That the sewing-machine industry has obtained a permanent foothold in China is certain and that the demand will steadily increase seems to be equally well assured. Machines manufactured in the United States, though more expensive, easily dominate the market, and this is due to the superiority of the article produced and the introduction of wide-awake American business methods in pushing its sale. This explanation contains a valuable lesson for the American manufacturer who desires to dispose of his goods in the Chinese market. Great Britain, Germany, France, and Japan are strongly intrenched in their various lines, constantly erecting additional commercial safeguards, and indifferent, half-hearted measures will not avail against them. The Chinaman is a shrewd trader and keenly appreciative of the quality of the goods from which he makes his selection. Because of this he leans toward the American products, but the manufacturer of the United States must not for an instant lose sight of the fact that he must give the Chinaman the goods he wants put up in strict accordance with Chinese custom, or fashion, or prejudice—however it may be styled—and at a price that he can afford to pay. With this as a foundation a competent American salesman, exercising the push and energy inseparable from live business methods in the United States, can establish and maintain a market, and it would then require only honorable dealing and the delivery of cargoes fully up to the standard of the sample steadily to increase it.

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COMMERCIAL CONDITIONS.

NOT AFFECTED BY THE LATE WAR—COMPETITORS OF THE UNITED STATES.

Vice-Consul Cloud, of Hangchow, replying to inquiries as to present commercial conditions in that section of China embraced in his consulate, makes a report from which the following points are taken:

The Russo-Japanese war does not appear to have affected seriously the markets of Hangchow, either with respect to its import or its export trade. There is no doubt, however, that the long-continued fluctuation of money values occasioned by the stress of war has had a depressing effect upon trade throughout the whole of China. This constant fluctuation of exchange has brought about a condition of affairs that has introduced into the business of this port, as well as into all the other ports of the Empire, an element of gambling, which renders it exceedingly difficult for the merchant to determine the amount in any one currency that will give him a desired profit upon the sale of his goods. And indeed a profit realized in one currency may not result in a profit when converted into another currency, as often happens in the complexity of exchanges which a merchant is compelled to undergo before his business transactions have been completed. This condition of affairs greatly increases the cost of trading, inasmuch as the merchant is compelled to ask large margins in order to insure proper profits. The war, it is true, closed large areas of consumption of foreign goods in Manchuria, which hampered American trade to some extent, but the war has scarcely affected American trade in this part of the Empire. It is not noticeable that American trade interests have suffered in Hangchow on account of the war any more than have the interests of any other nation.

EFFECTS OF THE BOYCOTT.

The present indications are that the boycott on American goods has all but terminated. It is inconceivable that the boycott should give American trade a permanent set-back, especially if American merchants and manufacturers will wisely increase their efforts to extend American trade in China. From an examination of customs reports and other data I should say that England and Germany have profited most by the boycott against American goods. However, it does not appear that these countries have gained as much as America has lost. The fact is the Chinese stopped buying altogether for a time, doubtless because they could not find, on short notice, in the other countries just the kind of merchandise they required. It is true that Japanese cotton goods of certain kinds are replacing American goods, or at least are sold where American goods ought to be sold. This is particularly true of towels, cotton flannel, etc. The Japanese product is vastly inferior to the American, but it is also vastly cheaper, a fact that accounts for its demand among the Chinese.

GERMAN TOYS AND ENGLISH JAMS.

It would seem that German notions, such as toys, gaudy bric-a-brac, kerosene lamps, etc., were rapidly commanding the market here as in

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other parts of China. One sees them everywhere, and the demand for such articles is growing rapidly. German hardware also commands a growing market. England has always been America's chief competitor in cotton piece goods, but I am not aware that England is gaining in the volume of her trade at the expense of the United States. Indeed, the reverse has been true for the last few years.

English jams and preserved fruits are commanding the markets in the Orient because the American fruit growers and preservers are not willing to study the needs of this part of the world and put a product upon the market that will successfully compete with the English article.

Sumatra oil continues to compete very strongly with American oil, and the Russian products were rapidly gaining upon the market at the outbreak of the recent war. As a result Russian shipments fell off greatly during the past year. As far as I have been able to discover, the various countries exporting goods to China are all treated alike in the matter of customs duties, examination, etc. I know of no advantage in this connection that any one country possesses over the others.

WHAT AMERICAN TRADE NEEDS.

The countries in most direct competition with American trade in Hangchow are England, Japan, Germany, and Holland. The Japanese and Germans are putting forth greater efforts to secure trade than are the Americans. Trade does not come for the asking, and to obtain and hold that of China requires constant and intelligent enterprise. What American trade needs in this part of China is able-minded men of sound business experience, who are willing to come here and work among the Chinese, show their wares, study the needs of the Chinese consumer, and then meet those needs in a business-like way. China is no place for the get-rich-quick sort of merchant, where one quality of samples may be shown and an inferior quality of goods shipped to the buyer. Samples and goods must always agree if Chinese customers are to be held. And whenever such a condition as above suggested prevails in China, then, and not until then, may America hope to secure her legitimate share of the Chinese trade.

TRADE OF SHANGHAI.

GREAT COMMERCIAL POSSIBILITIES—COMPARISON BY COUNTRIES.

Consul-General Rodgers, of Shanghai, furnishes the following description of Shanghai and the surrounding country and directs attention to the commercial development that may be looked for in the near future. He writes:

As at present constituted Shanghai consists of a native city with a population of perhaps 700,000, according to latest opinions, and international settlements which contain fully 200,000 people, of whom approximately 15,000 are foreigners of all nationalities. This population is constantly increasing, owing to the advantages offered as a place of residence, and it is certainly safe to say that in ten years the

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city as a whole will contain at least 1,500,000 people, the ratio of increase of foreigners being about the same as that of the Chinese. It is easy to understand why Shanghai is developing into a great city. Round about are the great Chinese centers of Soochow, Hangchow, Ningpo, Fuchau, Wuhu, Chinkiang, and Nanking, with their fertile tributary areas and their industries of various kinds. The great Yangtse delta country, productive to a high degree, is backed by the Yangtse Valley stretching to a thousand miles inland, having populous and rich cities lying in a country of undeveloped richness according to modern ideas.

The trade and commerce of this great region, with a population estimated from 125,000,000 to 175,000,000, must filter through Shanghai, leaving its effect in ever increasing volume. With such resources at home there could not fail to be results, but in addition Shanghai has the advantage of being the natural port for middle China. Here, in the track of the ocean traffic, call the ships from Japan and from the Occident. Here the cargo from the north is transhippedand from here it goes to the coast cities, to Manchurian ports, and to Korea. Up the Yangtse is sent the world's product, and each year the consumption grows greater. With the improvement of the Whangpoo River and the Yangtse bar will ensue a rush of commerce here which will make present day affairs small. The dredging operations to provide this improvement will begin soon, and then Shanghai as a deep-water port will soon be an actuality.

OUR PRINCIPAL COMPETITORS.

The principal competitors of the United States in the Shanghai trade are naturally England, Germany, France, and Japan. A comparison of the trade of Shanghai in 1904 with the great nations will be applicable. Allowing Great Britain and her colonies all the importations from Hongkong (25 per cent of the total given below), which is entirely beyond propriety, for a large amount of American product is transhipped there and is classed afterwards as English shipments, the figures are $85,583,691 gold. Those for the continent of Europe, including value of shipments from Russia in Asia, are $13,225,858. Those for Japan and Formosa are $20,310,821, and for the United States, the Hawaiian and Philippine Islands $19,032,216.

In exports, under the same classification of countries and under the same conditions as to Hongkong, Europe took to the value of $31,326,140 gold; Japan, $23,295,951; the United States, $18,889,361, and Great Britain, $18,207,444, of which more than half was sent to Hongkong for transshipment. It should be understood that all these figures are somewhat approximate, since the official records do not yet afford accurate results. It is undoubtedly true that American trade with Shanghai had before the boycott only two great competitors—Great Britain and Japan—and with neither did her importations and exportations vitally conflict.

But all the nations are now doing their utmost to attract the attention of the Chinese, to increase their influence, and to obtain a stronger foothold. Aside from the long-established prestige of Great Britain, there is the every-day effort to maintain and increase the respect paid to the English. Germany, not content with her fine consular estab-

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lishment and system, is constantly endeavoring to perfect her conditions in the outports; France, with her large concession in Shanghai and its able government, is improving her foothold in important places, and Japan, with her agents broadcast, is taking advantage of every opportunity. In Hankow is best seen the evidences of the aggressive tactics of our competitors, and the increase of their merchant marine seen in Shanghai is the logical consequence.

THE BOYCOTT.

EVIDENCES OF SUBSIDENCE—SATISFACTORY REPORTS.

Consul-General Rodgers, of Shanghai, and Consul-General Sammons, of Niuchwang, write briefly in regard to the boycott against American goods. Mr. Rodgers says, under date of September 12:

Prominent Chinese merchants and officials in Manchuria took no part in the agitation, which was promoted chiefly by representatives of southern guilds. Circulars and newspapers containing inflammatory statements hostile to the United States were speedily suppressed by the authorities. An attempt was made to prevent the unloading of oil of the Standard Oil Company from the steamship *Falk*, but the work was accomplished by means of Japanese coolies.

With the boycott suppressed and the military restrictions removed, large quantities of American cotton fabrics, kerosene oil, flour, and cigarettes will be required for the winter trade. The visible supply in all but flour is fairly adequate. Negotiations are now pending for from 150,000 to 250,000 sacks of Pacific coast (American) flour for delivery before river navigation closes in November.

Consul-General Sammons, under the same date, writes:

The boycott is not much in evidence in Shanghai, American goods under contract being taken and forwarded and in many instances new purchases being made. My information is that no meetings of consequence are being held, no placards are being posted, and no attempt in general is being made to revive the agitation. The Chinese merchants are still timid, but are regaining confidence. The native press is not hostile, and published without any unfriendly comment an interview with Secretary of War Taft given Saturday.

The report from the outports is satisfactory, with the exception that the product of the British-American Tobacco Company, namely, cigarettes, is still being boycotted somewhat. It is believed, however, that this is rather the result of trade competition with cigarettes of Japanese and Chinese manufacture than of the boycott against American products.

The opening of the Manchurian trade to Niuchwang is certainly responsible for a goodly portion of the better conditions, but the influence of the imperial edict, the proclamations of the viceroy, the opposition of the merchants to further agitation have all been factors of the greatest importance.

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MANCHURIA.

CIGARETTE CONTEST BETWEEN MANUFACTURERS IN MANCHURIA.

Consul-General Sammons, of Niuchwang, describes a vigorous contest that is being carried on between rival manufacturers of cigarettes. The ingenuity of the Japanese manufacturers in advertising their product will be found interesting. His report follows:

Cigarettes are being advertised with colored quarter-sheet posters and handbills in Niuchwang. The coloring of the advertising matter is mostly blood red, and the cigarette campaign is growing more active. The Japanese tobacco monopoly, on the one hand, is pushing three leading brands in Manchuria, while the British-American Tobacco Company, on the other, has its agents knocking at the gates leading to the late war zone and seeking to carry the campaign into the interior on equal terms. Thus far the British-American Company has not been allowed to send foreigners beyond Niuchwang, but through native subagents the virtues of the Virginia leaf are already being announced on the face of old Chinese walls that have never before been utilized for advertising purposes. The Japanese have the advantage of being able to push their goods under the direct supervision of their own countrymen. Japanese merchants, also, who sell to the army, have for several months been allowed to go into the interior to certain points, under Japanese military authority and regulation.

LURID ADVERTISEMENTS.

In Manchuria the natives, in some instances including the women, smoke cigarettes. The field is considered a rich one in this trade, and is consequently sought after with much eagerness. The lurid advertising matter used by both parties seeking the business of the enormous cigarette-smoking community is decorated with Chinese characters describing the wonderful qualities of the tobacco used. Pictures of the exact size and the distinguishing markings of the packages used are printed on the placards. The British-American Company makes a feature of the quality of the Virginia leaf that is used. The leaf is imported from America and manufactured into cigarettes at Shanghai. The Japanese tobacco monopoly puts its goods on this market under Chinese labels, but gives the names of its chief brands in English on the package. This method is the one adopted by its active rival.

JAPANESE INGENUITY.

A few days ago the British-American managers at Niuchwang, which is headquarters for Manchuria, billed the native city as prominently as a great circus is announced on American billboards. Following this, the Japanese tobacco monopoly managers began giving away sample cigarettes, attached to a neat card having Chinese and Japanese flags printed on top, with real matches for flagstaffs, and with miniature pictures of the boxes of their leading brands in pyramid form under the flags. Holes punched in the cards held the match flagstaffs, and slits, also cut in the card, admitted and held the sample cigarette.

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At the local headquarters of the monopoly the rush of Chinese coolies for these samples was so great as to block traffic along the bund. The coolies fought with each other to get possession of the gift and the cards. On their advertising matter the Japanese announce that their cigarette is of "government" manufacture, and as the cards bear both the great dragon of China and the sun flag of Japan the native purchaser may decide for himself which Government does the manufacturing. Among other announcements the Japanese agents declare that their cigarette "administers life;" "supports the spirits;" "this cigarette, of Government manufacture, is sweet and of good quality, famous, once tried always to be liked;" "will cause the smoker to feel as if in a dream like unto the Mountain Woo-Shan." The mountain referred to is in the district east of Sze-Ch'uen, where the Yangtze River enters that province. Its dozen peaks were likened to twelve sisters, according to the fable.

HOUSE-TO-HOUSE CANVASS.

The British-American Company has Chinese-speaking foreigners in charge of its campaign in Manchuria, and a house-to-house canvass, coupled with the giving away of samples and a lavish display of highly colored posters, characterizes their plan of meeting the competition of the local Japanese managers of the Nippon tobacco monopoly. As a matter of fact, the cigarette trade attracts more attention than all other forms of advertisement in the sale of foreign goods. Furthermore, the American cigarette trade managers are the pioneers in extensive billboard, free-sample, private-car, and house-boat methods of advertising in China.

COTTON AND OIL.

PREFERENCE GIVEN TO GOODS FROM THE UNITED STATES.

Returns for the three months ending June 30 show that popularity of American cotton goods and kerosene oil in Manchuria and northern China continues. English shirtings and jeans have, however, taken a prominent place after a marked slump, and England now holds the lead in the former, although the sales of the American product in jeans still predominate, with the Britons rapidly increasing their previously lagging trade in this particular line.

In drills and sheetings America has almost a monopoly of the extensive and growing business. And while large quantities of this class of goods are shown by the official records to have been imported at this port for the quarter ending June 30 last, all of the imports have not reached the consumers, owing to obstructions to the usual channels of trade consequent to the war. But with these channels again in normal condition, following a period of inability to meet the demands of the consumers throughout Manchuria, there is every indication of unprecedented demands and corresponding high prices during the coming winter. This condition of trade applies to various other articles of American manufacture which find a market in northern China and Manchuria.

In kerosene oil the June quarter shows the record-breaking total of over one million gallons received at Niuchwang. American kerosene oil has a secure monopoly of the trade, although agents for other oils are again investigating this field and, in time, hope to secure a part of

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the business. American kerosene oil and American sheetings, in particular, of all foreign products, seem to be most popular among the Chinese consumers.

THE CROPS.

KINDS AND CONDITION OF PRODUCTS.

Consul-General Sammons, of Niuchwang, reports that the crops in Manchuria are fairly normal. Relating to the kind of crops grown in Manchuria, he says:

Millet, Indian corn, and wheat are among the chief farm products of Manchuria. Apples and grapes do well, although the native apple is soft and lacks flavor. Tomatoes grow in great abundance, particularly in southern Manchuria, where asparagus also flourishes. All vegetables, as a rule, can be grown in abundance. A large quantity of the early fruit, especially pears and grapes, consumed by foreigners in Niuchwang comes, however, from Chefoo. Later these will be received here from the Liaoyang section of Manchuria.

With a continuation of the influx of Chinese from other parts of the Empire it is possible more vigorous efforts will be made to change the policy of the Chinese Government prohibiting the export of grain. Manchuria is capable of producing an immense quantity of millet seed, corn, and wheat for export, but although the Russians allowed some grain to be sent out of the country through this port when they were in charge the well-established rule of preventing grain and food stuffs from being exported is rigidly observed and enforced. It was only after much effort that the exportation of bean products was secured. Still, with a growing demand for food stuffs for export to Japan the near future may witness a relaxation of apparent Chinese inflexibility in this important respect.

The theory of prohibiting the exportation of food stuffs seems to have been the guarding against possible famine periods.

JAPAN.

IMPORTANCE OF THE BANTO.

METHODS OF DOING BUSINESS—TALKING AND TEETERING—MERCHANDISE IMPORTED AND PREFERRED.

Special Agent Crist furnishes a letter from Kobé, in which the business methods of Japan are described somewhat in detail. The importance of observing these established methods is such that our merchants should keep them constantly in mind. The methods of packing, lighterage, transportation, and other charges are also explained, and attention is called to the class of merchandise that is imported by our competitors and the particular kinds that are given popular preferment. The letter should be carefully perused by those interested in the oriental trade.

In order to meet the peculiarities of the Japanese trade and to maintain a thorough understanding of the desires of their patrons, each

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commission house employs one or more Japanese salesmen called "bantos." One chief banto, with various native assistants, is employed in each department of the business, while an American or European is in charge of the department and responsible to the head of the house for its administration. Without a banto, however, business in Japan would come to a standstill. Although the banto does not occupy the same relation to the business in all respects as the compradore in China, he is, nevertheless, quite as essential a factor. Even though the manager of a broker's house may speak Japanese fluently, as many do, he rarely undertakes the initial steps of a business transaction. The duty of the banto is to meet the Japanese merchant in his place of business, or when the merchant calls at the commission house to conduct the business, either buying or selling, to the point of closing the deal. All of the preliminaries, the great amount of talking and tea drinking which are a necessary preliminary to any transaction, are the portion of the banto. No effort is made by the broker to expedite matters, unless upon the suggestion of one of the natives. At the proper time he will be called upon to ratify the terms of the deal, or to accept or reject terms proposed by the merchant.

METHODS OF BUSINESS.

If a merchant desires goods furnished after some pattern or design submitted by him, he may call for bids and select the price most satisfactory, agreeing to pay the usual commission in addition; or, on the other hand, he may set his maximum price, when the broker will have to bring his commission and price within that figure. These are the usual methods of business in foreign trade pursued by the best-known commission houses, although purchases are made, when market prices seem to warrant, without orders from merchants upon the expectation of future orders at better prices, and some consignment business is also done.

When an order is placed the New York, London, or Hamburg office, as the case may be, advises their representative in the East by cable of date of shipment, line, etc., and the shipper draws against the commission house at sight, or thirty, sixty, or ninety days sight, according to previous agreement. The discounting bank takes the shipping documents—invoice, insurance policy, and copy of bill of lading—making them a part of the draft which is forwarded for collection. By this arrangement payment of the draft is made prior to delivery of goods, or under such conditions as the bank may require. It is customary, however, for banks to permit delivery to be made at once upon the guaranty of the draft by the agent. The letter of credit is made use of by some to accompany each order, but this is not the preferred method.

LIGHTERAGE AND OTHER CHARGES.

As all ships except those of light draft anchor offshore, landing and shipping agents are employed to deliver merchandise from ship to customs-house and furnish the necessary lighters and coolies to perform this service. A fixed charge is made for each package or case, which ranges from 4 sen (2 cents) to 18 sen (9 cents) for bags, cases, crates, bales, baskets, etc., up to a picul in weight, while measured tons range from 60 sen (30 cents) to 1 yen (50 cents), and tons by

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weight are from 65 sen (32½ cents) to 1.25 yen (62½ cents). These charges are borne by the consignee or agent, and have to be computed by him in fixing prices on imports.

ADVANTAGE OF SMALL PACKAGES.

In shipping small packages or in shipments amounting to 50 pounds or as much as 100 pounds, where the nature of the merchandise is such as to admit of its division into 4-pound packages, a most satisfactory method to be pursued is by means of parcels post. The rate by this means is 12 cents per pound, with a maximum of 4 pounds 6 ounces. At this rate shipments may be made from any point in the United States to any point in Japan and to the ports of China and Korea, and in fact to any country in the Postal Union. An additional charge of 8 cents per package insures safe delivery by registration. Delays incident to the landing of cargoes, fees, etc., in passing the customs, and other charges are avoided by making use of the parcels post, and in light, bulky articles a great saving in transportation charges is made. The many advantages and economies of this system of shipment are well worth the careful study of American exporters. When the nature of the goods is such as to preclude division into small packages to admit of sending by parcels post, parcel freight rates may be obtained through shipping brokers in America. A rate of $1.75 per 100 pounds is obtainable from central points in America to Kobé, Japan.

FOOTWEAR AND LEATHER.

Below are given some of the articles of import arriving at Kobé, showing the countries from which they come and the main reasons which influence their purchase in their present markets:

Shoes sold in Kobé are almost entirely of native makes. The styles are copied from English and American shoes imported for that purpose, the former styles predominating, though far more unsightly and uncomfortable in appearance and fit than American lasts. The Japanese use American leather almost entirely in their best shoes, as it gives the best results. English leather has been competing more strongly of late, their prices being about the same as American and German. The Japanese are engaging in tanning to a greater extent each year, but their standard is not yet up to the imported article. The wearing qualities and appearance of Japanese leather is much inferior to the imported article and is used only in the cheaper grades of shoes. Prices of shoes range along with those popularly prevailing in America, but not quite so high in the better qualities. Good hand-made shoes of American leathers can be obtained for 4.50 yen ($2.25) to 6.50 yen ($3.25). The best shoes carried in some stores sell for 7.50 yen ($3.75), while vici kid shoes can be obtained for 6.50 yen ($3.25) per pair. Children's shoes can be obtained for from 35 sen (17½ cents) to 1.80 yen (90 cents) per pair. For the prices asked these shoes offer good values. German-made rubber shoes are offered in about the same quantities and sizes as American makes, at prices that are practically the same for each. Prices range from 95 sen to 2 yen (47½ cents to $1) per pair. Tennis shoes may be obtained from 1.60 yen (80 cents) upward.

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DRUGS AND CHEMICALS.

The standard required in Japan for drugs and chemicals is the Pharmacopaea Germanica, fourth edition. In all tests and analyses made of imported chemicals and drugs a strict technical compliance with the requirement is observed. This rigid interpretation of the German standard has lead to the rejection of chemicals received from America, which for all practical purposes have conformed to the United States Pharmacopœia, a standard equally exacting. Notice should be taken by manufacturing pharmacists in America of this technical requirement. Germany supplies the bulk of the fine drugs and chemicals in this market, while much of the heavy chemicals come from England. The fact that prices offered by English concerns are much lower than those by American houses is sufficient reason for purchase in that market. As a fair illustration of the relation between prices it may be stated that carbolic acid is quoted by a large American drug house at 26 cents per pound in 50-pound cans, while an English concern quotes 13 cents. Acetic acid is offered at 10 cents per pound by manufacturers from both countries. From these prices English concerns give discounts of 2, 5, and even 10 per cent, with an alternative of extended time on the quoted price, and Americans allow no discounts, requiring cash with each order. Borax is consumed to a considerable extent, but England and Germany divide the market of $25,000 annually between themselves. With prices averaging around £12 10s. per ton f. o. b., London, it would seem that from the almost limitless output of this product in America this market could readily be supplied.

STATIONARY AND TURBINE ENGINES.

Stationary engines for cotton mills are in most cases purchased in England. The original purchases of stationary engines were made in England with feed pump, air pump, and condenser directly connected. This is not a present-day American principle, and though the American type may possess many advantages over the English engine the conservatism of the Japanese holds strongly to the original style, and to the present no great headway has been made in changing his desire for this kind of engine.

Steam turbines from America have been introduced of late with much success, and a good field will open for such machines in the near future. Machine tools, lathes, planers, shapers, plate rollers, steam hammers, etc., of the heavier types come mostly from England, while the smaller sizes of American make are most preferred. The question of price and quickness of delivery appear to be influencing factors in these lines. Notwithstanding the reputed ability of American concerns to effect quick delivery of manufactures in iron and steel, on a recent large order of machine tools the time quoted from America was fourteen months, while English manufacturers agreed on delivery in eight months.

Iron nails are shipped in kegs holding a picul each, and are sold at a flat price irrespective of quotations on different sizes. The prevailing prices are 6 yen ($3) to 6.50 yen ($3.25) per picul. Through Kobé there are shipped nails to the value of about $50,000 each month, according to the customs returns, while the entire purchases of the Empire during 1904 amounted to over $900,000.

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PAPER-MAKING INDUSTRY.

Wood pulp, both sulphite and mechanical, are used in Japan in paper making, which is carried on to a great extent in Osaka, Tokyo, Nagoya, Yokohama, and Tosa in Kiushiu Island. Not only is paper manufactured in these cities, where machine power is largely employed, but throughout the Empire there are centers or districts the residents of which are in great numbers devoted to paper making. In these places the industry is carried on by hand power. The Japanese Government is conducting experiments in wood pulp making, and is producing some sulphite wood pulp in the northern part of Hokkaido. To the present the results have no commercial value, however, and the output is of a very inferior quality.

Sulphite wood pulp is used in larger quantities than mechanical, and comes almost entirely from the Germans, though obtained by them from Norway and Sweden. England furnishes a small portion, while that from America is almost all mechanical wood pulp. The demand for wood pulp has been increasing during the last four or five years, and there should be a good market for the American article, especially from the Pacific coast. The nearness of this market to the Pacific slope States ought to enable American manufacturers of that region to completely control this commodity.

MANUFACTURES OF STEEL.

Although there is a preference for American-made steel plates, there are very few of them sold here, as the prices quoted on all orders are from 5 to 6 per cent higher than those received from English manufacturers. In gas and boiler tubes the American prices average about the same as those from other countries, with the result that our manufacturers are favored with a good share of this business. There is a steady and large demand throughout the entire country for wire nails of all sizes, and large orders are regularly placed by Japanese merchants upon a somewhat different plan than usually pursued. Supplies of 5,000 or 6,000 kegs of nails are purchased at times when the market is favorable. These orders are placed at intervals of two months or thereabouts and are on a speculative basis, the Japanese merchant relying on the fluctuations of the market to obtain his profits instead of fixing upon a certain advance of his purchase price when selling to his patrons.

WIRE NAILS, GALVANIZED AND CORRUGATED IRON.

Wire nails at present come mostly from Germany, although in the past American nails were in the majority. The speculation by the Japanese on the future prices of nails operates somewhat against the American product, as they seldom calculate on the market over two months ahead. Shipments from America via Suez take about three months by tramp freighters, and from Hamburg or Liverpool about two months. The price quotations would therefore have to be quite favorable in this commodity to offset the advantages obtained by this difference in time of delivery.

Galvanized corrugated iron sheets come from England principally, although Germany sells a small portion. Immense quantities are used,

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and the consumption is steadily increasing. At prices averaging 250 pence per picul American manufacturers do not compete. It is said that there has been no shipment of corrugated galvanized-iron sheets from America for over five years. In plain galvanized-iron sheets, however, a portion are bought in America, but the greater part of them come from England at prices in the neighborhood of 270 pence per picul. These sheets enter largely into the production of articles for domestic purposes, and their standard must be high to meet the wishes of their users.

WINDOW AND OTHER GLASS.

There is a steadily increasing use of window glass in stores and residences of every city, displacing to a great degree the thin Japanese paper window lights. This is noticeable even in the houses of the poorer classes, while the wealthier people in many instances have their houses fitted with glass windows to as great an extent as will be found in American houses. In small towns and farming districts window glass is used to a very considerable extent. To the present time almost the entire supply of this commodity is obtained from Belgium. In fact so indifferent are American glass manufacturers felt to be toward this market that requests are seldom made for prices except in England and Europe. It would seem that a market worth annually over $350,000 in window glass and $100,000 in plate glass and glass manufactures would offer some attraction to American manufacturers.

The manufactures of glass in Japan consist for the most part of beer and other bottles, lamp chimneys and shades, drinking glasses, cut glass, and a small amount of window glass. This last-named article has not been satisfactory, as the glass is not as yet made sufficiently clear for commercial purposes. Glass works exist principally in Osaka and Tokyo on a large scale, Osaka having about 20 plants, with from 30 to 200 operatives. Throughout the Empire there are families engaged in glass blowing whose output of lamp chimneys, shades, and bottles goes to supply the communities in their immediate vicinity.

BRITISH VIGILANCE.

In such staples as pig iron, channels, joists, angles, and pipes for steam and boiler purposes, this market is kept in close touch with prices in England by regular weekly cables. These quotations are generally received each Tuesday morning, and orders received in England during the following three days are promptly filled. Orders are taken during the remaining days subject to cable approval from London. This method of weekly quotations is not pursued by American houses, but by this close attention to the market in Japan England has been able to maintain a lead in many large lines far in advance of all other countries. Such methods produce a further result in that the names with whom the consumer has become acquainted are often the only ones to whom he will permit his specifications to be submitted when special contracts are to be considered. In one particular contract shown me, amounting to close upon $100,000, many items of which could have been furnished by American manufacturers, bids were requested in England, Germany, and France. The request was confined to manufacturers of those countries simply because of previous experience with their products.

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INDIFFERENCE OF AMERICAN MANUFACTURERS.

Hesitancy is also felt about submitting requests for bids on parts of orders to American concerns when manufacturers of other countries have been furnishing similar goods with satisfaction. Should there be a failure to properly comply with the requirements of specifications, importers know that the regular exporter has a well-defined interest in maintaining his name in the foreign market, while the one who at irregular intervals bids to supply orders may be as indifferent to the proper filling of the order as he is to the market itself. Every effort is made by exporters whose interests are in the foreign market to rectify any irregularity, while the experience with the transitory exporter is quite to the contrary. The sentiment here is general that until the American manufacturer feels the need for competing in the foreign market at all times, abandons his attitude of indifference toward that field, and is ready to earnestly and seriously consider its needs with the purpose of catering to them at all times, the bulk of the trade will go to other countries, where an unceasing study is made to cater to the wants and peculiarities. In short, when the American manufacturer concludes to treat the foreign buyer on somewhat the same plane as he does his good patron at home he will be able to reap a large reward for his attention in increased sales in this market.

THE EMPIRE IN PEACE.

PREPARATIONS TO EXPAND BUSINESS—LARGE INCREASE IN LOOMS AND SPINDLES—CANNING INDUSTRY ENLARGED.

It is evident that the people of Japan are preparing to enter upon a commercial campaign that will be as vigorously conducted as were their military operations in the field. In the following letter Special Agent Crist describes preparations that are being made to extend the cotton industry, and suggests that American manufacturers of looms and driving machinery have a fine opportunity to furnish supplies of this character. He also explains that Japan has largely, as a result of necessities growing out of the late war, established factories for canning meat and fish. This should be especially interesting to those engaged in the canning industry in this country. In response to instructions from the Bureau of Manufactures, Mr. Crist furnishes information regarding the kind and capacity of horses used in Japan, to which attention of those interested in the breeding of horses is invited. Mr. Crist's letter follows, having been written from Kobé, October 1:

The prevailing belief here is that in the near future there will be a great expansion of business, mainly through the enlargement of the capacity of established concerns rather than through the formation of new organizations for manufacturing purposes. The fate of the many ill-managed and poorly financed manufacturing schemes of mushroom growth which sprang up at the close of the Chino-Japanese war is still fresh in the minds of the conservative element, and greater caution will doubtless be observed in lending support to new enterprises.

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A close study is now being made of the economical administration of cotton spinning and weaving factories, with a view to their further enlargement. Most of these factories are equipped with machinery from England. The reason for this is to be found in the fact that the first mills erected in Japan were upon English patterns and equipped with English machinery throughout. When new mills were erected they were almost invariably patterned after the pioneer mills. Not only were spindles and looms of English design, but the engines for power purposes were obtained in that country. In their operation the question of economy has not figured very extensively in the past by reason of the exceeding cheapness of labor. The general preference is for machinery requiring one or two men to operate one machine rather than for the American variety, which admits of five or six being under the control of one man. The Japanese operative is not sufficiently responsible and careful to be intrusted with machinery of the latter class, which in his hands, it is believed, would be liable to derangement. Notwithstanding this, American weaving machinery is in successful operation in Osaka, and there is opportunity for its further introduction.

FINE OPPORTUNITY FOR AMERICANS.

In view of the past favor which the output of Japanese cotton mills has met both here and in China, there is a strong tendency to turn to England to obtain the equipment for the enlargement and modernizing of the cotton-weaving industry. This should be a fine opportunity for American manufacturers of spinning, weaving, and power machinery to obtain a large share of this if they will send out expert men able to thoroughly demonstrate the economy, efficiency, and simplicity of their machines. The situation is being closely watched by American importing houses having branches in New York, and there is a strong belief that steam turbo-generators, which are looked upon with high favor by the Japanese, with electric motors adapted to running looms or spindles in numbers of eight or ten, will meet with success.

The engineer of the American Trading Company informs me he is making a close study of this question and that manufacturers of steam turbo-generators, motors, or dynamos can obtain full information in regard to this matter by corresponding with the New York office of that company. I am also informed that this particular matter is being closely watched by representatives of English and German concerns.

JAPAN'S CANNING INDUSTRY.

During the war a great deal of attention was given to enlarging the fish and beef canning industries in Japan, necessitated by the unusual demand for such food for the army. Salmon canning was the branch principally developed, although a considerable quantity of beef was consumed in canning operations and resulted in a great rise in the prices of that article.

The supply of Hokkaido salmon was so nearly exhausted as to necessitate the importation of canned salmon from the Pacific States and Canada. While many of the smaller canneries may be discontinued as the war demand ceases, it is quite evident that a determined

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effort will be made to turn the excess of the output to the Asiatic and Australian market. It is stated upon high authority that sample shipments of canned salmon have been made to China, Korea, Australia, and even to the United States, and from the reports received they have met with favorable reception. Salted salmon and trout have been imported from America and Canada in larger quantities than usual, due in part to the exhaustion of the local supply and to the stopping of the Russian importations. Experts are being selected for governmental inspection purposes, so as to insure as high a standard as possible in the output and to compete successfully with the product from other countries. It is believed that there will be in the neighborhood of a hundred canning factories with facilities for exporting canned fish of different varieties, while previous to the war there was no exportation of any consequence of the canned product. As the supply of fish in the near-by waters is varied and practically inexhaustible, the effect of this new industry upon the American commodity will be watched with much interest.

INFERIORITY OF NATIVE HORSES.

The Japanese horse is an undersized animal, not weighing over 900 or 1,000 pounds, stands under 14 hands high, and is entirely inadequate to the demands made upon him. It is no uncommon sight to see a small horse hitched to the ordinary Japanese four-wheeled dray, pulling with evident effort a load consisting of 4 or 5 bales of cotton, each weighing 500 pounds or over. This heavy strain is evident in the sprung hock joints and generally stiffened condition of comparatively young horses. Stallions and mares are commonly used for draft purposes, while geldings are seldom ever seen. The Japanese dray weighs about 900 to 1,200 pounds, and has small front wheels measuring about 15 inches in diameter with rear wheels nearly 40 inches in height. The pull of the load comes from a height of 7 or 8 inches from the ground, is indirect, and necessitates greater effort than would be the case if it were made more direct.

The Government has been engaged for some years past in the improvement of the quality of the Japanese horse and has recently imported from England 33 horses, including 16 thoroughbreds, 10 trotters, 6 hackneys, and 1 saddle horse. These have been distributed to the various stud farms, situated in different parts of the Empire. Many of the best horses purchased for the army have been distributed to the Government farms for stud purposes.

There is a scarcity of horses in Japan, as all serviceable animals were commandeed by the authorities, and farmers and others have been put to much inconvenience. A good opportunity for the introduction of horses suitable for draft and farm purposes is now presented, and American breeders should avail themselves of it by sending representatives to this country to acquaint the authorities with their stock.

The director of the stud farms of the department of agriculture and commerce is now on a tour of inspection in England and Austria and will return to Japan in December next.

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JAPANESE TRADE.

REMARKABLE PROGRESS IN SPITE OF ALL OBSTACLES.

Consul-General Miller, of Yokohama, sends a clipping from the Japan Daily Mail, which contains an elaborate and interesting story of Japan's trade for the first half of the present year. It emphasizes the interest by furnishing figures for the first six months of other years. It is as follows:

Official statistics now enable us to form a clear idea of Japan's foreign trade during the first half of the current year. The total value was, in round numbers, 429 million yen, a wholly unprecedented figure, being 109 million yen greater than the aggregate for the corresponding period of 1904. Great inequality is seen in exports and imports. The exports represent only 142 millions, being 5 millions above the figure for the first half of 1904; and the imports, 286 millions, which is 103 millions in excess of the sum for the same semiannual period of the preceding year. The exact figures for the first half of the years indicated, expressed in yens, worth 0.498 cent, follow:

Description.	1905.	1904.	1903.
Exports	142,767,953	137,465,703	125,918,757
Imports	286,462,862	182,634,872	166,048,828
Total	429,230,815	320,100,575	291,967,585

This table shows that whereas the development of the export trade in 1904 amounted to over 11,000,000 yen it was only 5,000,000 in 1905. Nevertheless that any development at all should have taken place in spite of the withdrawal of about a million pairs of hands from the field of production is distinctly satisfactory.

The distribution of the trade among the various countries having commercial relations with Japan was for the first half year, expressed in yen, as follows:

Description.	1905.	1904.	1903.
China:			
Exports to	44,039,171	30,028,845	28,764,064
Imports from	21,456,753	20,530,606	21,830,505
Korea:			
Exports to	11,751,865	7,709,237	4,685,197
Imports from	3,491,357	2,461,259	5,948,098
British India:			
Exports to	3,628,932	4,555,411	3,149,513
Imports from	68,333,911	42,353,267	39,690,958
France:			
Exports to	10,843,662	14,291,106	13,253,261
Imports from	2,342,865	1,680,201	2,779,961
England:			
Exports to	6,695,643	8,720,483	9,320,119
Imports from	65,509,355	34,098,704	23,803,657
Belgium:			
Exports to	331,269	139,798	125,131
Imports from	5,074,744	3,234,024	3,768,154
Italy:			
Exports to	2,987,471	3,120,242	3,530,450
Imports from	161,074	396,868	95,249

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Description.	1905.	1904.	1903.
Germany:			
Exports to	2,097,951	2,204,048	2,667,294
Imports from	21,676,114	14,026,238	12,729,374
Austria-Hungary:			
Exports to	327,750	399,878	662,637
Imports from	1,083,230	685,192	2,307,021
Russia (Europe and Asia):			
Exports to	5,592	66,568	1,899,554
Imports from	1,266,221	3,874,807	2,274,069
United States:			
Exports to	40,771,676	39,979,585	33,543,246
Imports from	64,098,210	26,763,077	24,843,413
British America:			
Exports to	1,364,773	1,388,893	995,234
Imports from	361,512	387,969	109,327
Australia:			
Exports to	2,017,862	2,790,479	1,516,290
Imports from	4,113,981	2,211,948	601,743
Other:			
Exports to	15,904,336	22,071,130	21,806,767
Imports from	26,543,535	29,980,722	25,267,299
Totals:			
Exports	142,767,953	137,465,703	125,918,757
Imports	286,462,862	182,634,872	166,048,828
Grand total	429,230,815	320,100,575	291,967,585

STRIKING FEATURE.

One of the most striking features of this table is the evidence it furnishes that Japan's export trade grew sensibly in the case of China and Korea only. The increase in these two countries' purchases from Japan was over 18,000,000 yen, whereas every other country, with insignificant exceptions in the cases of Belgium and the United States, bought less than in the corresponding half year of 1904, the net result being an increment of only 5,000,000 over all the figures. It would seem that China and Korea are destined to be the great market for Japan's produce and manufactures, and this will become even more pronounced when the products of the fisheries newly acquired under the peace treaty begin to find their way to the two neighboring empires, as they certainly will. The principal staples which Japan sells in ever-growing bulk to China and Korea are cotton yarns, cotton cloth, towels, matches, umbrellas, copper, porcelains, beer, and marine products. With regard to other countries the chief staples of export that showed a decline were habutaye, raw silk, tea, rice, camphor, vegetable wax, copper, straw braid, and coal. The United States, although they took less tea, straw braid, and camphor than usual, were increased purchasers of raw silk, habutaye, fancy matting, porcelains, and lacquers.

A NOTABLE FACT.

In the import trade the most notable fact is that the United States made increased sales to the extent of over 38,000,000, England to the extent of 31,000,000, and British India to the extent of 26,000,000. Thus these three countries stand for 95,000,000 out of the total increment of 109,000,000, their share being no less than 87 per cent of the whole. All the other countries, with the exception of Italy, Russia, and British America, had some part in the increase, but in Germany's case alone is the record at all considerable. The augmented staples of Japan's purchases from Eastern countries were raw cotton, wool,

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hemp, fur, skins, hides, cereals, and fertilizers; in other words, chiefly materials for manufacture; while from occidental countries her demand was mainly for manufactured articles, as piece goods, machinery, etc.

It is notable that out of this total trade of 429,000,000 England and her dependencies stand for 152,000,000 approximately and the United States for 105,000,000, so that the Anglo-Saxon race did 257,000,000 of the commerce, leaving only 172,000,000 to the rest of the world.

THE PRINCIPAL EXPORTS.

The figures for the principal staples of export during the first half-year periods, expressed in yens, were as follows:

Articles.	1905.	1904.	1903.
Raw silk	28,196,439	28,186,589	27,037,378
Waste silk and cocoons	3,110,816	2,281,325	2,814,472
Habutaye	14,058,092	18,144,590	12,659,144
Silk handkerchiefs	2,355,229	2,335,385	1,510,362
Cotton yarns	16,785,863	13,608,078	13,973,866
Cotton cloth	3,758,446	3,507,738	2,425,879
Matches	5,199,367	4,755,210	4,022,045
Fancy matting	2,367,904	2,010,879	1,943,117
Porcelain, etc	2,245,436	1,619,768	1,390,184
Straw braid	2,851,958	3,143,139	2,447,710
Lacquers	528,912	511,833	381,631
Umbrellas	1,071,373	963,820	892,468
Fans	559,582	471,474	495,128
Cigarettes	1,560,553	1,845,554	803,400
Tea	4,014,762	5,757,088	5,798,963
Rice	1,610,902	3,550,696	2,210,030
Camphor	1,476,391	1,952,549	2,103,749
Copper	6,566,675	5,887,410	7,926,584
Coal	7,731,981	8,319,361	10,074,865
Vegetable wax	331,161	748,840	467,899
Others	34,850,395	26,678,480	23,043,910
Total	141,232,237	136,229,806	124,422,784
Reexports	1,535,716	1,235,897	1,495,973
Grand total	142,767,953	137,465,703	125,918,757

It is thus seen that out of 20 principal staples of export 11 show increases and 9 show decreases. In the column of increases cotton yarns stand first, and are followed in order by waste silk and cocoons, copper, and porcelain. The European demand for raw silk was weak, but America bought freely, and she continued to be a strong customer for habutaye, whereas the sales of the latter to France, owing to the imposition of a heavy tax, fell off by 2,600,000 yen. The United States proved a comparatively bad market for silk handkerchiefs, but freely took fancy matting and straw braid, and there was a growing demand in China and Korea for cotton yarn, matches, and umbrellas. China, however, took less cotton cloth than she had done in the corresponding period of 1904, but Korea amply compensated. It will be observed that whereas the export of cigarettes more than doubled in the first half of 1904, as compared with the same period of 1903, there was a falling off in 1905.

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COMMODITIES IMPORTED.

Turning now to imports, we have the following table showing the values of the goods that went into Japan during the first half of the years indicated:

Articles.	1905.	1904.	1903.
Raw cotton	68,715,898	35,762,935	36,082,657
Cotton cloth	8,041,988	2,257,825	4,902,687
Wool and worsted yarns	7,488,291	5,121,051	2,167,969
Blankets	3,248,445	55,576	17,153
Cloth and other woolens	13,535,311	2,581,554	4,490,867
Hemp, etc	1,308,155	1,184,395	1,007,737
Hempen cloth	1,748,482	183,355	131,471
Iron of sorts	12,294,306	6,657,760	5,972,836
Iron nails	1,559,841	915,965	688,062
Iron pipes	1,010,424	563,611	789,829
Sheet iron and steel plates	3,541,744	849,693	417,943
Machinery	12,213,540	4,756,272	4,122,146
Cars and locomotives	2,666,888	2,001,495	1,947,468
Aniline dyes, etc	1,949,073	1,759,474	3,369,698
Furs and oxhides	1,562,269	649,369	329,329
Leather, sole, etc	7,645,877	1,065,048	713,448
Paper	2,502,264	1,451,801	1,764,330
Rice	39,904,009	35,263,994	37,841,174
Beans, etc	4,978,121	3,014,326	3,970,062
Wheat	1,504,995	1,205,985	922,961
Flour	5,737,098	5,064,949	3,049,691
Sugar	5,000,303	13,522,034	9,037,095
Coal	5,423,502	7,511,449	777,977
Kerosene	9,237,804	9,275,956	5,588,487
Bean cake and other fertilizers	10,715,325	4,413,513	6,396,004
Steamers	6,028,280	5,561,901	807,367
Others	46,387,741	29,786,669	28,567,468
Total	285,949,974	182,396,955	165,873,916
Reimports	512,888	237,917	174,912
Grand total	286,462,862	182,634,872	166,048,828

Of the 26 staples tabulated above, it will be seen that 3 only—sugar, coal, and kerosene—show diminutions; in the cases of all the other 23 there are increases. The very large increase in purchases of raw cotton from abroad in the half year under review was in consequence of short stocks resulting from high prices at the places of production during the early part of 1904.

NEW LINE OF STEAMSHIPS PROPOSED.

Mr. Miller also reports that a steamship line, financed in Japan, is to be inaugurated between Manila and Japan. One of the promoters of the company is Raphael de Castro Midalgo, chairman of the Manila Chamber of Commerce, who recently sailed from America for England, where he is to purchase six steamships having a gross tonnage of about 2,000 tons each. The service that it is proposed to establish between Manila and Japan will be a triweekly one. Yokohama will be the main Japanese port of the line, and calls will also be made at Kobe and Nagasaki.

In connection with this enterprise it may be noted that a great deal of Japanese capital is now finding its way to the Philippines. The reluctance of American financiers to invest money in the islands until the railroads are built is not being followed by the Japanese, who look upon the prospects held out by Philippine enterprises as unusually promising. The promoters of the company are business men, resident in Manila, who were led to make application to Japanese capitalists

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because they believed that the raising of the needed money for establishing the line could not be effected in American sources. Raphael de Castro Midalgo, who is prominent among the promoters, has been prominent in the anti-American crusade in the Philippines, and after the massacre of Captain Farley and his men in the interior (about five years ago) was arrested, charged with running guns to the natives. Influence was brought to bear at Washington, and he was pardoned on his promise to stop supplying the natives with guns.

WOOL INDUSTRY.

JAPANESE FACTORIES BUYING IN AUSTRALIA.

Consul-General Bray, of Melbourne, reports an interview with Dr. F. Otake, a Japanese manufacturer, in regard to the future supply of raw wool for Japan. In it one is led to look upon Japan as a future buyer and manipulator of large quantities of Australian, South African, and other wools. It all goes to show that those who looked upon the industrial development of Japan as imminent were right. There are grave questions that the future will have to face in all parts of the Orient, and the largest is not a long way off from the spindles and looms of China and Japan. The people are marvelously patient, persistent, and, above all, capable. Their finger skill is not surpassed by that of any people on earth. This, backed by cheap labor, is bound to give the Orient advantages against which the nations of the West will find it difficult to contend. The report follows:

According to a newspaper report, Doctor Otake stated that Japan is likely in the near future to be one of the best customers of Australia in the matter of wool. Formerly the Japanese used to buy their wool in London, but of late they have been making most of their purchases in Australia. They have also been buying Indian and Chinese wools, but these are of a poor quality, and there is no doubt that before long they will be replaced, as far as Japan is concerned, by the Australian product, which, on the whole, is regarded as the best to be obtained anywhere. Doctor Otake considers, however, that the South American wool is better adapted for certain classes of materials.

There seems to be no likelihood of Japan growing its own wool. Sometime ago a systematic attempt to breed sheep was made under the direction of experts from South America, but the experiment failed conspicuously for several reasons. One of these was that the Japanese do not like mutton; but, in the opinion of Doctor Otake, the failure is of no importance. "It is not worth while to breed sheep," he observes, "seeing that Australia is so near; besides, the Panama Canal will reduce the distance from Argentina. No, we shall always buy our wool, and not grow it, and the demand will be a steady one. We shall want a good deal of wool in future, for, in addition to the Government mill, there are now five privately owned mills in Japan, and the number will increase." The Senju mill, which employs 2,000 hands, male and female, was founded about twenty years ago by the Government in order to introduce the woolen manufacture into Japan.

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GREATER JAPAN.

MARCH OF PROGRESS RESUMED.

According to the Revue de Commerce Extérieur, Japan is striding forward. She is fast taking her place among the great maritime and industrial nations. She has known how best to build up her trade and her home production. In order to get capital to enter her gates she has just broken with one of her oldest traditions. She is allowing foreigners to buy and hold land, and she is permitting her own people to mortgage their real-estate holdings. It was not possible in the past for capital to enter Japan, for the first demand made by capital is security, and the best security on earth is the earth itself. The law permitting the Japanese to mortgage their real estate puts into their possession the possibilities of loans amounting at least to 785,000,000 francs. With such a sum mines may be opened, soil reclaimed, and factories built and equipped. Mortgages may be placed now on mills, mines, railroads, etc., thus materially augmenting the Empire's industrial and trading powers. Everybody in the East is beginning to notice the fact that Japan is growing less and less dependent upon foreign factories. She is manufacturing many goods that went into her formerly from Europe and America. Nor is this all. She has gone forward until she is able to export large quantities of goods similar to those formerly bought from others for her own children. She is gaining a strong hold on the Far East. Expressed in figures her progress there is indicated by an advance from 56,000,000 yen in 1900 to 97,000,000 yen in 1904. If anybody is waiting for Japan to fail or fall in her efforts to augment her industrial power or to extend her trade, he will be disappointed.

A NEW LINE OF STEAMSHIPS.

The Oriental Steamship Company, according to a report of the German consul-general in Yokahama, has organized a line of steamships to ply between Japan and South America. The company is sending two chartered steamers of 4,000 tons each to ply between Hongkong, Moji, Kobe, Yokahama, Callao, and Iquique. They will carry to South America Chinese coolies and oriental goods, and on the trip home will carry saltpeter from Chile and cotton and wool particularly from Peru. This movement is interesting, from the fact that it is made in the face of a failure. The Compania Maritima Occidental did all it could to build up just such a trade, but failed. In fact its boat, the *Kensington*, made but two trips. It is a question whether the new line will be backed by the Japanese, Chinese, and Peruvian Governments. That the Japanese are destined some day to have extensive dealings with South America is as certain as anything connected with that progressive people. If subsidies will secure the lines until the trade develops far enough to put the steamship company beyond the need of subsidies they will doubtless be forthcoming.

Peru is undoubtedly interested in everything that goes on in the Pacific, so is Chile, so is Japan and China. No one who has watched the work of Japan in recent years will be surprised to see her seek and get a good hold on South American trade. It is only natural that she should make the effort, for South America has many things that Japan and China need. South America can use a great many Japanese and Chinese products.

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GOVERNMENTAL ENTERPRISES.

Consul Sharp, of Kobe, furnishes a paragraph from the Nichi Nichi Shimbun, the oldest newspaper in Tokyo, which outlines the plans of the Japanese Government in regard to the commercial development of the country. The Nichi Nichi states that as a first installment of the postbellum enterprises, the Government has decided to establish during the next fiscal year a Japanese-Chinese bank, erect a number of museums at various important foreign marts, enlarge the Kobe and Yokohama customs-houses, establish a commercial and industrial commissioners' office, and complete the elevated railway in Tokyo. The expenditure required for these enterprises will be included in the budget for the next fiscal year. It is also stated that the Government intends to appoint several commercial agents in Europe and America.

THE RICE CROP.

Consul Sharp further reports that the prospects for the rice crop in that consular district, which were very unfavorable earlier in the season, have much improved. In the prefecture of Hiogo it is officially estimated that the crop will be 10,545,160 bushels, a decrease of 3.9 per cent as compared with the unusally large crop of 10,975,170 bushels last year, but slightly more than the average yield of this prefecture, which is reckoned at 10,139,577 bushels. Similar figures for the other prefectures in this district are not available, but the official estimate for the crop of the whole country is 204,344,370 bushels, 19.9 per cent less than the total yield last year, and about 7 per cent less than the normal crop. As most of the important rice-growing regions of Japan are in this consular district, this estimate may fairly be taken as a general indication of the situation in the district as well.

STRAITS SETTLEMENTS.

PECULIAR BUSINESS CUSTOMS OF THE ORIENT.

CONDITIONS AND REQUIREMENTS—LACK OF KNOWLEDGE AND INDIFFERENCE OF AMERICANS—INSTANCES OF BAD FAITH.

Consul-General Wilber, of Singapore, Straits Settlements, a large and important commercial center in the Far East, furnishes a valuable letter obtained from Mr. Hugo J. M. Ellis, of the firm of Ellis & Co., in which he furnishes information, based on more than four years' residence in Singapore, in regard to the business of that section and how it is conducted. Mr. Ellis is an American, and represents at Singapore a number of American houses. He prepared a letter in response to the request of Consul-General Wilber, and has covered the ground very completely. In addition to declaring what should be done by Americans who are desirous of entering the oriental markets, Mr. Ellis points out very plainly many things that should be carefully

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avoided, and names practices on the part of some of our exporters that should be promptly corrected. The letter of Mr. Ellis follows:

You have asked me for some of my experiences in Singapore during the four years I have been trying to exploit the goods of American manufacturers. You have also asked me for suggestions that may lead to a more intelligent understanding of local requirements and conditions and a broadening of American commercial interests in this territory. My firm represents American manufacturers exclusively, and, although we have been offered several German and English agencies, we have always declined to represent others, because we are all Americans and naturally work for the development of the commercial interests of our own country. Our territory extends to Ceylon, Burma, Java, and Siam, and as I have personally covered it all, spending considerable time in each country, I have been able to acquire a pretty intimate knowledge of the local conditions and the methods which make the English and German, especially the Germans, successful in securing the trade. I must say that from observation the methods of the American manufacturers are very crude in comparison with the European manufacturers. When it comes to export business to this part of the world, the Americans are in the kindergarten class, generally speaking.

SHORTCOMINGS OF AMERICANS.

We frequently get letters addressed, "Singapore, China," "Singapore, India, China," and even "Singapore, Zanzibar," and frequently we get two or three letters following close after each other asking us why we have not replied to a previous one, when the first letter was still only halfway across to us. One of our expensive experiences every month is the bill we have to pay the post-office for short postage on letters from America. Frequently we have had to pay as high as 68 cents excess postage on one letter, and have even had this occur with firms after we have called their attention to it. We know European concerns who, if they receive such letters, refuse to accept and send them back. No doubt this, in many cases, causes a financial loss to the manufacturer, and in any event makes us look ridiculous. Our manufacturers do not realize that it takes thirty-two days for letters to reach New York from Singapore, thirty-six from Bangkok, and about the same time from Java.

Our people too often increase our troubles by overlooking shipments, sidetracking them for two or three months in favor of domestic orders, and in some cases shipping them contrary to our direction, incurring increased expense and delays. We once had a shipment from New York that went down to New Orleans, then by the Southern Pacific to San Francisco, thence to Hongkong, where it lay for a month, and then was transhipped to Singapore. It was five months on the way and cost four times as much as if it had been shipped straight from New York by one of the freight steamers for Singapore. We have had to resell goods time and again because our orders have been so delayed that buyers refuse to take them up. In some cases, after having waited a reasonable time, they have ordered similar goods from England and got them before ours arrived.

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SHREWDEST AND CRAFTIEST TRADERS.

We have to deal not with savages of Central Africa or confiding Indians but with some of the shrewest and craftiest traders in the world, who were traders when our ancestors were roaming the woods in skins. Not only are they good traders, but they are extremely conservative. When once they get accustomed to a brand, they stick to it with wonderful tenacity, and in some cases where a "chop" or brand is concerned price is no object. Here is an instance: Fifteen years ago a European concern introduced a certain article under their own brand. A few years later another concern came into the market offering the same thing from the same manufacturer under a different brand, and after a while a third party came into the market with the same article under their own brand. Now these three parties are buying the same thing from the same manufacturer, and yet the oldest-established brand has the largest sale and secures 20 per cent better price than the other two. Another instance: An English manufacturer many years ago made a large consignment of certain goods and by some mistake the boxes were stenciled with the brand and the firm's name both inside and outside. The goods caught on, but when the second lot came along with the stenciling on the outside alone the Chinese would not look at them, and ever since then this firm has had to stencil their boxes inside and out. We have tried to impress this on our manufacturers, but very few of them realize its meaning or will make any attempt to conform to the wishes of the trade. They say, "If you can't sell what we make we don't care for the trade;" but the time is coming when our American manufacturers will be glad to get the business, and at smaller profits than they can secure now, in order to keep their factories going. European nations are far-sighted enough to see that American competition is capable of becoming dangerous and are entrenching themselves every day and doing everything in their power to hold the trade for themselves.

METHODS OF DOING BUSINESS.

Methods of doing business vary very considerably in all parts of our territory. In no two are they alike. A style or shape of shoe that may be popular in Burma may not sell at half price in Singapore. Our mnnufacturers can not realize that each of these countries contains an entirely different race of people. While the Chinaman is the principal trader in nearly all these ports, he has to buy what suits his customers. Naturally a native or Chinese dealer is not going to give a very large order for the first time on an American product changed to suit his particular style until he is satisfied that the American concern can do it as well as the English or German and that it is to his advantage to change.

RESULTS OF BAD PACKING.

In many instances where we have underscored special instructions in red ink no attention has been paid to them and we frequently have had to resell the goods at a loss. As American manufacturers demand payment in New York, we very rarely get any redress.

We rarely get a shipment from New York without a number of the cases being landed in a very badly damaged condition, due entirely to

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either too light or insufficient packing. Our manufacturers think, because a case will stand shipment in a box car in America, it is good enough to ship halfway round the world by steamer, forgetting that many tons of cargo are liable to be piled on top of it and that the motion of the steamer in rough weather will put an additional strain on it. We have had shipments of bicycles come out in the flimsiest crating and protected by ordinary coarse brown paper. It was not to be wondered at that 75 per cent of the crates were smashed up before they reached here. I have seen castings come out so exposed that a sharp blow against a hard projection would break them. English are particularly good at packing, and on all goods that are likely to be affected by dampness they are very particular to line the wooden cases with tin and the seams are soldered.

AGENTS AND AGENCIES.

Our people make two great mistakes. Sometimes they give their accounts to foreign importers, who either take and bury them or use them for the sake of comparison. Naturally, at same figures they will give the business to manufacturers of their own country. The other mistake is that they give them to some association or individual, who tries to work the world through the mails. I once had an amusing experience with one of these associations, which was evidently getting $100 a year out of each manufacturer. They wrote to the manufacturers of an article that had absolutely no chance for sale in this territory that they had an inquiry from a firm in Penang and advised them to write quickly. This letter was sent on to us by the manufacturers, and evidently by the tone of their letters they thought we had been asleep. We sent the correspondence to our Penang agent, and the reply we got was that the Penang firm had never heard of this export association or of the article referred to, and therefore had never written about it, and, furthermore, it would be the last thing in the world they would think of purchasing. Yet American manufacturers who will throw away money on such propositions will decline to furnish an accredited American representative, located right on the ground, with the necessary samples to properly exploit their goods or to spend one cent in advertising.

INSTANCES OF BAD FAITH.

Manufacturers of specialties who have scores of salesmen all over the United States, and who spend small fortunes in advertising, expect to introduce their goods out here through catalogues and pamphlets and get cash in New York without any further expenditure. Manufacturers who do send salesmen out here too often send young and inexperienced men, who spend too short a time in each port and whose general behavior suggests that they regard their mission as a junketing tour. English and German manufacturers either work through local agents, who are furnished liberally with samples which are to be sold for the account of the manufacturer at best prices obtainable when they have outlived their usefulness, or several of them will club together and employ an experienced salesman, each one guaranteeing him a certain sum toward his expenses and furnishing him with samples. They give such salesmen a commission on the entire business of their terri-

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tory, whether they secure the orders personally or not. I have repeatedly heard such men say that the income from the mail orders sent in direct to their houses after a few trips exceeded that derived from orders taken by them personally. On the other hand, it is worth while noting that it is notorious among foreigners out here that American manufacturers, as a rule, do not protect their agents. We have even had manufacturers who solicited our cooperation and then quoted direct to local dealers better discounts than those given to us. We are glad to say that we represent some manufacturers who are extremely scrupulous in this respect and wish we could say that of all of them. I think it is unintentional with some, or due to carelessness; but in some cases we have found it to be intentional; and when that is the case, we throw up the account and refuse to have anything further to do with the manufacturer.

COST OF SELLING.

Our people do not realize that, owing to the great loss of time in going from one port to another and the increased expense of traveling and living, it costs a good deal more to sell goods in this territory than it does at home. In basing their export discount and selling commission to agents they do so on an American basis, which does not come anywhere near compensating their agents for the amount of time, trouble, and expense necessary to properly exploit the goods. Another thing our people are not familiar with is the fact that eastern traders are extremely slow buyers and champion procrastinators. When in Rangoon recently I figured that the orders taken cost me on an average ten trips to each dealer. In this particular town a dealer would come up to the show room and place part of an order for one line, then go away and in a day or two come back and make another order. Two or three days later another visit would be made, and so on for three weeks, entailing about ten trips on my part and half a dozen on his. You can not hustle the East, and it costs time and money and wear and tear on nerves to await its pleasure.

HOW TO DO BUSINESS.

In conclusion, I beg to add that the one way for our manufacturers to get hold of business is to do just as one of our most prominent manufacturers is now doing who recently gave us his account. He sent a man out first who went over our territory thoroughly, and this man had had a world-wide experience and an intimate knowledge of his own goods. He decided that Singapore was the proper distributing point for the territory which we have already outlined. He has ordered a stock of several hundred cases of goods, which his experience in other markets and observation during his stay in this territory would indicate as most saleable, and he will return to meet that stock when it arrives, accompanied by an experienced American lady demonstrator to demonstrate and sell the goods in each port. He will fix a c. i. f. price for delivery in each port and force every dealer to buy from the Singapore stock, refusing to sell through any exporter or even direct from the factory, but only through us as their agents. This is a most admirable way for introducing a provision line, but of course is not applicable to some others.

In machinery lines the manufacturers should have expert salesmen

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constantly traveling, looking up business, and subject to the call of their agent, located in the center of the territory. Perhaps it may be said that with a traveling salesman a resident agent is unnecessary. This is a mistake, for a resident agent is in close touch with and has a fairly good knowledge of all people likely to require machinery, and could be pounding away at these people, giving them prompt replies to inquiries and securing for them at short notice the services of an expert. He could not only make up their specifications, but also superintend the erection of their machinery. People object to writing to America for information, owing to the length of time it takes to get a reply. Sometimes six or eight months will be consumed before the manufacturer can get at just what the man wanted, and in that time the order might go elsewhere.

WHAT AMERICANS SHOULD DO.

Americans should be just as prompt in filling export orders as in attending to domestic business.

They should be careful to fill orders exactly as specified and not try to substitute.

They should strive for a better steamship service, with regular sailing date from Atlantic ports. Pacific coast ports are pretty well provided for in this respect, but can not compete with European freight rates on goods manufactured in our Eastern States. The direct service from New York to this part of the world is irregular. Frequently we have had goods on board steamers in New York two or three weeks before they sailed. They have not been calling at Colombo or Penang, which ports are directly on their route, because they claim they can not afford to do so without certain amount of cargo being guaranteed. They will never get the amount guaranteed, but would get much in excess of it, if buyers in those ports could depend on regular stops. As it is now, we have to transship back to Colombo, at an additional expense, or ship by the more expensive route, via England, Hamburg, or Genoa.

Samples should be distributed judiciously, and only at the suggestion of local agents.

Specialties should be advertised, and methods of advertising, which are different for eastern countries from our own, should be studied carefully.

Wherever possible, American interests should be intrusted to Americans and not to foreigners.

All goods should be carefully packed. In some cases it would almost pay a manufacturer to send the head of his packing department to England to study their system of packing.

In estimating export discounts and selling commissions to agents due allowance should be made for the increased selling costs, so that manufacturers' agents would have an incentive to devote their best energies to each line. If this was done agents out here could afford to put on more salesmen.

The manager of the foreign department of a manufacturer or some equally competent man should travel carefully over the whole Orient and familiarize himself with conditions prevailing in the different markets. It would be money well spent, but before going to such an expense the manufacturers should ascertain through the American con-

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suls whether goods of their manufacture are saleable in their particular territory. In this connection it would not pay a hard-coal stove manufacturer to spend any time in Ceylon, India, Burma, or Singapore, especially in Singapore, where the temperature averages 85° all the year round.

Our manufacturers should study and conform to styles and requirements of the various markets, and not be too impatient of results or figure too much on the initial cost of making changes. An English house will make shoes any shape a dealer wants, and a German house will stamp a dealer's name and brand for an order of 50 boxes of soap.

The shipping departments of our firms should familiarize themselves with the geography and steamship routes of the whole territory, and the credit department with the proper way to make out documents for all kinds of shipments. In some countries there are customs duties, while in others there are none.

We have had no end of trouble the past four years and between the mistakes, carelessness, and indifference of American manufacturers on the one side and the conservatism and peculiarities of native dealers on the other, our patience has often been tried to the breaking point. We are hoping for better things, however, and we thoroughly appreciate your efforts in this direction.

TIME TO ACT.

AMERICANS SHOULD BEGIN NOW.

In connection with the foregoing, Consul-General Wilber adds the following:

The time is coming when we will need a permanent foreign outlet for the surplus of our factories, and it is all very well, when that time comes, for our manufacturers to say we will go out and get it, but a little money well spent in the right direction now will make it much easier and less expensive to get the trade. One can not enter these markets and capture them immediately. It takes time and hard work, and if our manufacturers do not awaken to this fact they will find the English and Germans, especially the latter, so strongly intrenched, when they do want a share of the trade, that it will cost much money and time to get a share.

A regular line of steamers from New York through the Suez Canal to Manila would greatly facilitate trade by enabling men on the ground to guarantee time deliveries. Five or six manufacturers, whose lines do not conflict, can and ought to club together, send out men of exceptional ability and character as resident agents, assign them certain territory, guarantee salaries sufficient to induce them to come here, allow them a commission on all sales in their territory, whether made by them personally or through the mail, and protect them in every way the same as many English and German manufacturers protect their agents. Their men are on the ground. They follow all suggestions that are made to them in regard to requirements. They say to their men, "Tell us what your trade wants in price and style and we are prepared to furnish it." Such a letter from a German manufacturer to his representative I saw not long ago.

That is the competition our people must face in these markets. I speak plainly because of my interest in the sale of everything Ameri-

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can. We need enough Americans of the right sort here to make their presence felt, and until this method is adopted by our people, and all requirements are complied with, just so long we will be practically out of these markets as compared with other countries.

SYRIA.

FARM IMPLEMENTS NEEDED.

GOOD OPPORTUNITY FOR AMERICAN MANUFACTURERS.

Consul Jackson, of Alexandretta, furnishes an account of the need of modern agricultural implements and machinery in northern Syria. Primitive methods of harvesting the crops, he says, are giving way to the more modern usages, which necessitate the demand for goods of this character, especially of American make. He writes:

Throughout northern Syria, there still exist so many of the most primitive methods in connection with agriculture that some suggestions may lead to successful trade relations between American manufacturers of agricultural implements and machinery and some of the more progressive merchants in that business here.

The district of Alexandretta, at least some of it, is mountainous, and, therefore, such machinery as mowers, binders, and threshing machines would be altogether out of the question in practical use. However, about two-thirds of it is composed of the great Plains of Aleppo and Adana.

PRIMITIVE METHODS IN GATHERING CROPS.

Immense quantities of wheat, oats, and barley are raised, most of which is cut by hand and thrashed by placing the grain on a flat circular surface and driving an ox or horse hitched to a flat sled, with sharp stones in the bottom over it, until the grain is broken up into a fine chaff. It is then pitched into the air, the wind blowing the chaff away, leaving the grain in a pile in the center. It takes several weeks to thrash a small stack; moreover, the operation must be suspended during wet weather, but the introduction of modern binders and thrashing machines would make the gathering of grain a much cheaper and more rapid process. In the province of Adana there is a strip of coast plain about 150 miles long, varying from 15 to 60 miles wide, of very productive land, where I found a number of mowers in use, and some binders and thrashing machines and about 40 steam and horse power thrashers. For miles there could be seen on every hand men and women cutting with the sickle and thrashing with horse or ox and sled. Just over the mountain range from the coast lies the large fertile country known as the Plains of Aleppo, about 100 miles wide and over 200 miles long, throughout which grain raising is the principal industry, and where there is no modern agricultural machinery whatsoever. This condition prevails throughout entire northern Syria, wherein under these most primitive methods is raised a great quantity of grain, most of which is exported to Europe.

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SUPERIORITY OF AMERICAN PRODUCTS.

American goods and products are estimated superior to and sought above all others, but the Syrian business man and dealer is a cautious and suspicious person, mindful always of his own interest to a degree of extreme discretion when confronted with the purchase of machinery or implements tending in any way to change the long-established methods of his country. The only way to persuade these people to purchase and use American machinery is to send first-class traveling agents here, supplied with sufficient machines and implements to illustrate the value and practicability thereof in action. As it will be an undertaking of no small proportions to transport traction engines over the range, and the scarcity of proper fuel therefor would have to be reckoned with in the province of Aleppo, I believe that horse-power thrashers would be the most practical therein. Also, as labor is cheap, it is likely that mowers instead of binders would meet with more favor. When once convinced of the worth thereof, this territory would prove a perfect bonanza for the American manufacturers of modern agricultural implements and machinery, but unless pursued in a practical manner it will be almost a useless expenditure of time and money to attempt to obtain trade in this line.

TRANSPORTATION AND PACKING.

A railroad runs from Mersine through Tarsus to Adana, so that no great amount of overland transportation is now necessary in that province, but all goods sent to Aleppo must, after landing at Alexandretta, be carried by camels, horses, and donkeys, or on wagons over 15 miles of mountain road before coming to the plain, and on to Aleppo, a total distance of about 90 miles, which takes three or four days. This road is very good, but all machinery, in addition to such care as must be taken in crating and packing for foreign shipment, must be packed in such small pieces or parcels as will enable the safe transportation thereof when sent to Aleppo for distribution. Another thing that will confront the traveling agent is the different languages spoken in this country, but one able to speak Turkish, Arabic, and French, or either one of them, will get along very well; otherwise, an interpreter will be necessary, which is never as satisfactory as when one can avoid it.

INDIA.

TRADE IN BURMA.

SUGGESTIONS FROM AN AMERICAN RESIDENT MERCHANT—AN INVITING MARKET.

Mr. J. H. Scholes, an American who has been in India for several years engaged in business there, has written to the Secretary of Commerce and Labor a letter which contains much information that will be valuable to persons engaged in the oriental trade, and will be especially interesting to those who may be contemplating efforts to extend American trade in the East Indies. Mr. Scholes is located at Mandalay,

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Burma, at which place his communication is dated. In explanation of his letter Mr. Scholes states he read in an American newspaper that the Department of Commerce and Labor was directing efforts to increase the export trade of the United States, and therefore he contributes information based on his knowledge of business methods and his experience in India. Mr. Scholes in closing his letter expresses a willingness to furnish information to American manufacturers or merchants who may address him, and to act as the representative of American houses. His letter follows:

The general reputation of American goods in this country is high, but at the same time it is almost impossible to sell anything without samples. Pictures of machinery, etc., in catalogues are of little or no use among these people, who have never seen nor heard of most kinds of American machines. One peculiarity of all oriental races is that nearly every individual is naturally tricky and suspicious, and believing every other man to be likewise, he invariably wants to see samples of what he buys or orders. He will take no man's word without proof. Germany has flooded the country with cheap, trashy goods, which have made the bazaar dealers more suspicious. Many private purchasers will not buy German goods now, and this fact would assist materially in increasing consumption of American goods.

AMERICAN GOODS UNKNOWN.

There are almost no goods of American origin sold in Burma at present. Importers of goods from other countries invariably speak disparagingly of American goods, especially of machinery, of which they know nothing. I was about to close an order here recently for an American sawmill, but some engineer told the party that our sawmills were not adapted for sawing the hard timber of Burma; consequently I lost the sale. If a sample of such a mill had been on hand and could have been set up, he would have bought it. A government engineer also told a contractor that American road and ditching machinery would not work here. He knew absolutely nothing about the machines, but, like most government officials here, was ready to condemn anything American. Considering that English sawmills, as used in Burma, would not be used by American mill men under any consideration, as they are a hundred years behind the times, such officiousness comes with bad grace. There is not a complete woodworking plant in Burma; nearly all sawmills that have planers, etc., are out of date, and it is very probable that with samples of machinery here, all new and some old mills would put in American machines.

AN INVITING MARKET.

I am confident that nearly all lines of American goods will find ready sale if properly conducted on the American plan of pushing sales. The oriental custom, even among European traders, is to sit down and wait for customers. By going out after trade, as in America, a firm would secure a large share of the trade.

Many bazaar merchants wish to handle American textile goods and wares of different kinds, and there are many novelties which would

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become popular if made known here. Farming is conducted in Burma and India mostly on the plan of three thousand years ago, and it is probable that many plows and other farm implements could be sold, especially after a few in operation had demonstrated their great superiority over present methods. Introducing farm machinery will require much effort at first, as the cultivators will have to be educated up to it, like children; but when the wave of popularity of such implements begins to flow over Burma the sales will reach a high figure.

THREE METHODS SUGGESTED.

In order to increase their exports to this country, the manufacturers have three methods open to them: First, traveling salesmen, each representing several firms; second, opening agencies at the principal points, managed exclusively by patriotic Americans, and third, through American firms locating in the principal cities and buying and stocking their establishments with goods. To do the last requires a lifelong residence of the proprietors or managers, which very few Americans would like to assume in this climate. The traveling salesman, coming fresh from home, would know nothing about the methods of the oriental businessman, and in consequence would lose many orders, and it is doubtful if he would ever make his second trip, as there are no hotels except in the largest cities, and most of these are pretty "rank" affairs. It would pay no firm, probably, to send a man out for one trip only, or to send new men every year, unless he carried an exceptionally profitable line, judging from an eight years' practical experience as traveling salesman in the Western States of the United States.

THE AGENCY PLAN RECOMMENDED.

The agency plan, in my opinion, is the least expensive, will do the most business, and will be the most satisfactory in the long run. Under this plan there is no doubt that agencies at Rangoon (for Burma, with subsidiary small branch at Mandaly), Bombay, Calcutta, perhaps Madras for India, Colombo for Ceylon, would pay well within a short time after opening. These should be supplied with a full line of samples (including certain specified machinery) adapted for the trade of these countries. In order to give as wide a range as possible to the various members of the manufacturers' association, certain firms in all lines could be represented at each agency. No two agencies should have the same firms to represent, as it would be impossible to represent, for instance, all textile manufacturers at one place and do good work for each in the same class of goods. Rents are not so high as in American cities, and coolies can be had at 12 to 15 rupees per month, clerks from 20 to 50, and the managers can secure the services of Eurasian or native traveling salesmen, who could be speedily trained by him, to go out to country towns to solicit trade on salaries of 30 to 75 rupees and expenses per month, the expense running from 2 to 3 rupees per day, or on a small salary and commission on certain amount of profits he made for the agency. These in a short time would learn the business and work up a large trade, and, being familiar with the ways of the country, would do a far larger business than foreign salesmen could and at a much less expense. In the meantime the manager's office would have many daily callers to do business shortly after open-

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ing out samples, as such an establishment would have a display so far superior to any now in these cities that curiosity would bring all the bazaar people to view them, and the fine attraction would naturally cause them to want to deal in such goods.

There are many peculiarities connected with doing business with these people which can be learned only by long practical experience, and it is in this that the manager's assistants would be of great importance and value to him. In starting such an agency it would be necessary for the association to pay rent and other running expenses until the business became self supporting.

After this the manager could be paid a liberal commission on sales, and this method would encourage him to work to his utmost to increase his income. If goods were supplied to him at export prices and discounts to jobbers, enabling him to meet successfully European competition, he could pay all expenses probably of the agency and have a good income besides. The expense and salary part of the scheme could be worked out on a satisfactory basis for all concerned after the business was developed, unless the manager was paid a monthly salary exclusively. Perhaps the better plan would be a salary and commission as this is likely to be the most satisfactory. For some lines it would pay better to carry a fair amount of stock on hand to fill quick orders. Such a list could be made out by the writer if required for further information.

ADMONITION TO MANUFACTURERS.

If the American manufacturers wish to largely increase their exports to this country, it will require some effort to do so on their part. When they start out with the formula "goods to be paid f. o. b. cars at the factory," or "to be paid on presentation of documents f. o. b. steamer at New York," they are not going to get the people of India to buy their goods. Merchants can now, in cases of good credit standing, get their supplies from Europe on thirty or sixty day draft, and in others pay 25 to 33⅓ per cent, sometimes 50 per cent, advance with order and pay balance on arrival of documents. Now the agency could get 25 to 50 per cent down and have a written contract with buyer, that in case he fails to receive the goods on arrival, they shall be sold at auction and the money advanced forfeited.

This is the custom in India on all foreign orders, and it protects the shipper. The agency would be able to dispose of such shipments easily and save loss.

There is not much use in giving American agencies in India and Burma to English firms, as they make little or no effort to sell the goods against those of their own country. Most of the firms in these countries are Scotch, and they are still less inclined to push American wares. Of course the German firms would not touch them at all. Some time ago there was talk of sending over a steamer load of samples and goods with a lot of salesmen, to call at the seaports of India and other countries. This would probably be a means of selling the goods on board and getting a few future orders, but the trade could not be held afterwards unless salesmen were left behind to continue the work, as the foreign dealers already on the ground would do their best to head off further American business. In the agency plan, if these same gentry tried to cut prices to run the agency out, the national

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association of manufacturers could follow suit for a short time and soon make them tired of it. It would be necessary for the whole association to back up the enterprise, and cutting of prices by the enemy would not last long. This is another feature of the agency plan that could not be managed so successfully in any other method of selling American goods out here.

TRADE WITH ARGENTINA.

India is making efforts to extend her trade. The rich harvest of wheat in Argentina in 1903–4 led India to look thither for food and for a market in which to sell some of her own products. In 1904 Argentina imported 64,158 tons of jute and jute products. India hopes to be able to sell its paper to Argentina. Thus, by the sale of jute, paper, and other native products, India hopes to be able to pay for her purchases of breadstuffs. In recent years considerable progress has been made by India in paper making. There were nine paper mills operating in that country at the end of 1904, employing 4,500 hands, turning off 44,000,000 pounds per annum, worth 6,000,000 rupees.[a] All these efforts, if successful, will affect the paper trade of the United States and Germany. Furthermore, there is talk of transporting Indian coal to Argentina. One thing is certain, that the entire East is aroused now as never before. In the near future no part of the world will be without oriental products, and all parts of the world will pay tribute to its skillful cheap labor.

INDO-CHINA.

POSSIBILITIES OF THE FUTURE.

A COUNTRY OF WHICH LITTLE IS KNOWN—COMMERCIAL GROWTH.

In the following report Consul-General Schuyler, of Bangkok, presents an interesting picture of French Indo-China, pointing out the past, the possibilities of the future, with a word about the classes of American goods that might find a market or fairly successful sales. He writes:

The French possessions in the Far East, collectively known as Indo-China, are perhaps, to most people, the least known part of Asia. Very little attention has been given to them by explorers and travelers and still less by students of commercial affairs. The reason for this is difficult to find. Saigon, the chief port, lies less than three days from Hongkong and about the same from Singapore by the large steamships of the Messageries Maritimes Company, the subsidized French line from Marseille. There is a steamer every two weeks to Bangkok, Siam (four days), by the Messageries Fluviales de l'Indo-Chine, which line also maintains regular services with the other ports of the colony, and there are many vessels at irregular intervals to Java and the Philippines. Indo-China is therefore accessible both to the tourist and the commercial traveler, and it would seem that when

[a] Rupee=32.4 cents.

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the resources and needs of the country are considered and understood a much greater and closer intercourse with the United States would result.

GEOGRAPHICAL SITUATION AND POPULATION.

The French possessions in the Far East, comprising Cochin China, Cambodia, Annam, Tonkin, and Laos, known collectively as French Indo-China, lie between 8° 30′ and 23° 23′ north latitude and 97° 40′ and 107° east longitude (Paris), and cover an area (270,000 square miles) twice as large as France or one-tenth the area of the United States, and have a population of some 25,233,000, most of whom are Annamites. The Chinese are supposed to number about 150,000, but there are probably more. There are some 7,000 Europeans, chiefly French fonctionnaires and soldiers. The chief races of natives are the Annamites, Tonkinese, Cambodians, Laos, Mois, Muongs, Nuns, and Thos. Ethnologically the different peoples are most interesting, and the study of their languages, habits, and history is being carried on by the archæological mission known as the "Ecole Française d'Extrême Orient." This school was established in 1898, and has done excellent work in its own lines.

Cochin China and Tonkin are for the most part fertile deltas. Between them is Annam, a long mountainous tract of country with a narrow littoral on one side and a wild, thinly populated hill district extending to the great river Mekong on the other. The coast line is abrupt and mountainous with large bays and excellent harbors. The climate, in general and especially in the plains, is extremely hot and humid. There are two seasons, wet and dry. The chief rivers are the Mekong (1,900 miles), which has been navigated as far as Chinese territory, although rapids and other obstructions are a hindrance to commerce; the Songkoi or Red River, which is ascended by small steamers as far as Larkai in Yunnan, and the Black River. These three flow into the South China Sea. There are also many small rivers which afford almost the only means of travel in the interior where the luxuriance of the tropical vegetation makes travel by land an impossibility.

HISTORICAL AND POLITICAL.

Cochin-China was acquired by the French Government in 1864; the first settlement at Saigon, however, dates from 1858. The French protectorate over Cambodia was recognized in 1863 and that over Annam in 1874, but their present status dates from the two conventions of 1884. Tonkin became French territory after the peace with China in 1885. The Laos country was added to the French dominions in 1893, and in 1896 the Mekong was declared to be the boundary between French and British territory. In 1898–99 the port of Kwang-Chow-Wan on the Lien Chow Peninsula was leased from China for ninety-nine years. At the present time a Franco-Siamese commission is engaged in determining the exact boundary between Siam and the French possessions.

For administrative purposes Cochin-China is directly under French officials, Annam and Cambodia are ruled by their kings with the aid of French residents. The financial and political unity of Indo-China and its period of prosperity date from the arrival of M. Doumer as governor-general in 1897. The present capital of the whole territory

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is Hanoi, in Tonkin. Financially the colony was considered a loss to France for many years, but its condition is now satisfactory. The estimated expenditure, according to the budget for 1904, was about $17,000,000. The colony has been self-supporting since 1899. The chief sources of revenue are customs and excise. In 1898 a loan of $40,000,000 for railroads was raised in France.

GENERAL ADMINISTRATION.

The general administration of the colony is under a governor-general, with almost sovereign powers, who is responsible solely to the minister for the colonies at Paris, assisted by a council of state. The French army in Indo-China consists of 17 regiments of Europeans and 17 of natives; 18 batteries of French artillery; altogether some 8,000 Frenchmen and 12,000 natives.

The recent war between Japan and Russia and the preservation of the integrity of the Chinese Empire gives to all the present colonies of western powers an importance which they did not possess while each power considered that in the near future it was most probable that some part of the dismembered Empire would come under its control and ultimately become a new colonial possession.

Now, however, the nations are realizing that what they have at present is all the territory they are likely to have for some time, and that it is now of greatly increased importance both commercially and politically.

COMMUNICATION.

By far the most important means of communication in Indo-China is by water. The almost impenetrable jungle renders land travel, except by a few routes, impossible. The great desire of the French explorers of the country was to find a practicable water route by the Mekong and Red rivers from the coast of Cochin-China to the populous districts and the markets of Yunnan and the adjoining Chinese territory. Unfortunately, the falls and rapids of the upper stretches of those rivers rendered the route of less importance than was supposed. Nevertheless, the Mekong is the seventh largest river of the world. The chief harbors of Indo-China are Saigon, Haiphong (Hanoi), Tourane, and the recently acquired port of Krat, which gives Cambodia a seaport. Haiphong is forty-eight hours and Saigon about sixty hours by steamer from Hongkong. The Tonle Sap, or Great Lake, the largest body of fresh water in Asia, is 120 miles long and in some parts 20 miles wide. Its outlet flows into the Mekong.

RAILROADS AND STEAMSHIPS.

The railroads of Indo-China comprise lines from Haiphong to Hanoi, and thence to Langson, on the borders of the Chinese province of Kwang Si (160 miles), from Saigon to Mytho (44 miles), and to Khanhao (44 miles finished), and Hanoi to Ninh-Binh. Lines soon to be completed are Thanh Ba to Laokai (140 miles), thence to Yunnan-fu (220 miles). There is a line under construction from Hué to Tourane, and one from Saigon to Tanlinh in Annam is projected. Besides these there are also tramways in operation.

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There is constant steamship communication from Saigon and Haiphong with Hongkong, Singapore, Manila, and the Dutch Indies. Bangkok and the coast towns are reached by the mail steamers of the Messageries Fluviales de l'Indo Chine.

FOREIGN TRADE AND NATIVE PRODUCTS.

Up to the present time the commercial possibilities of French Indo-China have received very little attention at the hands of Americans. There is a commercial agency of the United States at Saigon. The immense increase in the total volume of the foreign trade of Indo-China is shown by the fact that in five years exports have increased by more than 300 per cent and imports by more than 500 per cent, 60 per cent of this being from nations other than France. About one-fifth of the trade is via Hongkong.

The principal productions of Indo-China are rice, silk, cotton, sugar, spice, tea, tobacco, pepper, and fish. By far the largest export is rice, which amounted in 1902 to about $27,600,000. In 1904, 833,470 tons were exported, a gain over 1903 of 251,683 tons. The importation of rice into the Philippines from Indo-China is assuming very large proportions and is rapidly increasing. In 1896 the importation was 3,380 tons and 113,617 tons in 1903, while for the first six months of 1905 the amount was 94,291 tons, or at the rate of 188,582 tons for the present year. The chief imports are cotton goods, jute bags, and metals. The chief imports from France are machinery and supplies for public works and for the troops. Coal is extensively mined at Tourano and on the coast of Tonkin. Gold, silver, tin, copper, and lead are also found. There is a cotton-spinning mill in Hanoi with 16,000 spindles, and other manufactures are being started. Indo-China is at present, however, and will long remain, an agricultural country.

The clearing of shipping at the port of Saigon in 1904 was in vessels of all nations, 383 of 481,170 tons; to this number must be added the French ships of the Messageries Maratimes, Messageries Fluviales, Compagnie Nationale, and Chargeurs Reunis, bringing up the total to 608 vessels of 871,286 tons. One hundred and fifty-eight vessels of 235,917 tons, with an average tonnage of 1,493, were under the British flag. With the exception of the French mail steamers the British have 49 per cent and the French 19 per cent of the total shipping of the port of Saigon. The chief drawback to the extension of the Indo-Chinese trade with countries other than France is the preferential tariff, which acts against all foreign imports. This, however, may be modified in the future.

The chief fields for the extension of American trade in Indo-China at present would seem to be agricultural, rice and sawmilling machinery, tools, cheap cotton goods of gaudy designs, electrical goods and supplies, clocks and watches, steam and petroleum launches and motors, cheap novelties and toys. American agents should be sent directly, and business should be left as little as possible to commission agents of other nationalities.

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SIAM.

REMARKABLE PROGRESS INDICATED.

The imports of Siam in 1904, the last year for which reliable figures have been furnished, amounted to 101,386,456 tikals (tikal equals 28 cents). Of these Bangkok passed over 78,000,000, including eleven and a half millions worth of metal for coins. Singapore leads with 25,000,000 tikals or 30 per cent of the total imports, followed by Hongkong with nearly 19,000,000, or 24 per cent Of Singapore's shipments to Siam, England is down for fully three-fifths and Germany for one-fifth. Great Britain and Ireland follow Singapore and Hongkong with 15,347,000, or 19.6 per cent of the total.

The imports consist largely of drugs, chemicals, cotton goods, glass and fine glassware, crystal, hardware, hats, caps, gold and silver ware, iron and steel goods, machines, and alcoholic beverages. However small and humble the hermit kingdom may be considered, it is still a part of the Asiatic people whose advent among the world's markets is of propitious augury. The land is rich in some things. It is sure to want a great many western products. These can be made as well and cheaply in the United States as anywhere. An effort ought to be made to secure as much of the Siamese market as possible. The list of its imports is large, and includes all kinds of machine-made articles, from pins and needles up to locomotive engines, steel bridges, and rails.

IMPORTS AND EXPORTS.

The following table tells the story of Siam's imports and exports, with the percentages of the more important countries participating therein:

	Imports.		Exports.	
	1904.	1903.	1904.	1903.
Germany	58.16	57.00	61.26	61.21
Great Britain	15.25	17.00	15.89	12.31
Holland	1.77	1.86	.003	.004
France	.84	.44	.46	.39
Norway	12.31	13.5	17.33	23.06

The record of recent years shows a gain in Siam's mercantile marine. Whereas in 1902 only 34 Siamese ships entered Bangkok, 4.71 per cent of the total, in 1903, 49, or 7.99 per cent, and 1904, 72 ships, or 9.97 per cent, entered. The tonnage of these Siamese ships increased from 11,392 tons in 1902 to 28,325 tons in 1904. Their part in the imports rose from 1.48 per cent in 1902 to 11.01 per cent in 1904, and in the exports from 0.58 to 3.4 per cent. These are significant figures. They indicate a healthy, constant growth. The rate of increase, if not remarkable, is certainly satisfactory to the Siamese. The Germans and English, long accustomed to look upon the Orient as unprogressive and conservative, are looking with some alarm at Siam's, China's, and Japan's efforts to emancipate themselves from the West.

AERMOTORS AND WINDMILLS.

Consul-General Schuyler, of Bangkok, reports that improvements are in contemplation by the government that will require the use of

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machinery, for the supplying of which Americans may compete. He writes:

The government of Siam is completing preliminary surveys for an elaborate system of irrigation which is intended to convert much of what is at present waste land or forest into productive fields for the cultivation of rice, the great staple of the country, and also of fruits and vegetables. In order to irrigate their fields from the present system of klongs or small canals, which penetrate the areas now under cultivation, the Siamese use the most primitive methods, consisting of scoops suspended by a rope from a stick or a kind of treadmill containing small compartments, each of which brings up about a pint of water. Both of these methods are performed by cooly labor.

With the introduction of more extensive and scientific systems of irrigation will undoubtedly come a demand for improved methods of raising water for the fields, and this demand should be supplied by American aermotors, windmills, and pumping apparatus. One or two American aermotors are now in use here and are giving satisfaction. Recently orders for Danish machinery of this kind have been given. American manufacturers are requested to send complete catalogues of their aermotors, windmills, and pumps to this consulate-general for distribution and reference. All such catalogues should include prices and terms of sale, and should be especially full with regard to the pumps and their fittings.

BOMBAY.

PROGRESS IN THE TEA TRADE.

AREA, GROWTH OF PRODUCTION, DISTRIBUTION, AND PROFITS.

Consul Fee, of Bombay, transmits a review of a recent report issued by the department of commerce and industry of the British Indian government on the progress made in the tea industry of that country, which follows:

The area under tea in India at the end of the year 1904 extended over 524,517 acres, about 64 per cent of the whole being in the valleys of the Brahmaputra and Surma, in Assam, and about 26 per cent in Bengal. The cultivation of tea in India is limited, therefore, to the extent of nine-tenths in the two provinces of Assam and Bengal, and the other tenth is divided between northern and southern India.

DISTRIBUTION.

Assam had 131,822 acres under cultivation; Brahmapootra, 205,299; Bengal, 134,585; The Punjaub, 9,342; Southern India, 32,790, and the United Provinces, 7,953. Since 1903 a reduction in the area cultivated is noticeable, the more so as for 19 years previously an annual increase had been recorded. There is a small area in Upper Burma that should not be classed with the others since most of its tea is never, or rarely, sold outside, being used by the Burmese themselves as a condiment or pickle and not as a stimulating beverage. A small amount, a few thousand pounds, go to Siam or the Straits Settlements.

INCREASED PRODUCTION.

The annual output of tea is not only steadily increasing but is doing so in more than double the ratio of the increase in the area under pro-

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duction. This appears to warrant the assumption that by more scientific methods the land itself is far more productive than formerly. In the last twenty years the area under cultivation has increased 83 per cent, while the increase in production has developed over 211 per cent. Possibly owing to the fall in prices, the area under cultivation has remained practically stationary during the last five years. Nevertheless the total productions in 1904 are nearly 25,000,000 pounds more than in the year 1900. The total production of tea for all India, for the year 1904, is given at 222,203,661 pounds, this amount being greater than was produced in any previous year, and just double the production of fifteen years ago. On the average of the last five years, the yield to the acre, dividing the total yield by the area of the land bearing mature plants, has been 400 pounds.

CAPITAL AND PERSONS EMPLOYED.

According to the returns of the registrars of Indian joint-stock companies and the published accounts of the companies registered in London, the capital engaged in the production of tea amounts to about $60,778,000. It is claimed that 81 per cent of this capital belongs to shareholders in companies whose head offices are in London. This gives a general average capital of $115 per acre. But the true capital value must be slightly larger, since the amount of private capital engaged in the industry is unknown, while the area under tea represents the private property as well as the companies' gardens. The number of persons employed in the industry in the year 1904 is returned at 475,266 permanently and 76,009 temporarily, or altogether 551,275 persons, which works out to about one person on the average to the acre.

EFFECTS OF ENTERPRISE.

The taste for Indian and Ceylon tea has gone on increasing for many years. Great Britain is very fond of it; Germany is growing so, eastern people are taking kindly to it. Push, enterprise, and science have helped to put the teas of India and Ceylon in a favorable position. In many out of the way places, in far off Africa, the islands of the sea, Ceylon's and India's agents have been making markets for this tea. At no time were the prospects brighter, notwithstanding the slight decline in the area cultivated since 1903.

The principal destinations to which exports have been declared during the last two years have been as indicated in the annexed table:

Whither exported.	1903–4.	1904–5.
United Kingdom	170,186,000	167,691,000
Canada	8,576,000	12,607,000
Russia	9,451,000	9,332,000
Australia	7,269,000	6,601,000
Turkey, Asiatic	2,830,000	4,009,000
Turkey, European	216,000	363,000
Persia	2,171,000	3,136,000
United States	1,528,000	2,237,000
China	2,009,000	1,813,000
Ceylon	869,000	1,292,000
Germany	546,000	930,000
Other countries	1,899,000	3,029,000
Afghanistan, Baluchistan, Tibet, and other places by land	1,992,000	2,260,000
Total	209,522,000	214,300,000

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AVERAGE PRICES.

The average prices of the various descriptions of tea sold at the public sales held in Calcutta during the tea season have been computed in the statistical department for seven years past. From these accounts the figures below are taken, being the prices per pound of the three descriptions which form the largest proportion of the tea sold:

Year.	Broken pekoe.	Pekoe.	Pekoe-Souchong.
1890	$0.17¾	$0.14¼	$0.11¾
1895	.18	.14 5/16	.11¾
1900	.12	.10	.08 4/16
1901	.12¼	.10 5/16	.08¾
1902	.12⅝	.10 6/16	.08 3/4
1903	.13 7/16	.11¾	.10¾
1904	.11¾	.10¾	.09

DEPRECIATION IN VALUE.

The fall in prices has affected all qualities; and since 1888 in the three best known descriptions of tea—Broken Pekoe, Pekoe, and Pekoe-Souchong—the average rates of sale have diminished 44, 34, and 28 per cent, respectively. This fall in price can not be attributed to a deterioration in quality, as in that case markets would not have been so readily found. Eliminating this cause, the only other reasons that find acceptance are that the greatly increased outturn has cheapened the article, and in a lesser degree that the import duty of 2d. into the United Kingdom, lately withdrawn, may have influenced the question.

COAL OUTPUT.

STEADY INCREASE IN PRODUCTION.

According to Anglo-Oriental Commerce for October, the total number of coal mines in operation in 1904 in India was 296 (256 in Bengal), compared with 302 (279 in Bengal) in 1903. The production in Bengal in 1904 represents more than six-sevenths of the whole Indian output of coal, which has been as follows in the last five years:

Year.	Tons.	Year.	Tons.
1900	6,118,692	1903	7,438,386
1901	6,635,727	1904	8,216,706
1902	7,424,402		

The output has increased every year for the last nineteen years, i. e., from 1,294,221 tons in 1885 to 8,216,706 tons in 1904. Dullness of trade was the cause of the increase in 1903 being very small, but there was a better demand in 1904, and the quantity raised was larger by 778,320 tons, or 10.5 per cent. Production has declined in the Warora and Umaria collieries (in the central provinces and central India) and in Burma, but has risen elsewhere, nearly 90 per cent of the rise being in Bengal.

The exports from Calcutta in 1904–5 amounted to 2,375,977 tons, about three-fourths of this being loaded into coasting vessels, and,

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including 770,589 tons of bunker coal shipped for use on steamers engaged in the foreign and coasting trade, 3,146,566 tons left the port, or nearly 45 per cent of the output of Bengal collieries in 1904.

CEYLON.

CHANCE FOR AMERICAN MACHINERY.

Consul Morey, of Colombo, reports that the opening of a new railway in Ceylon has disclosed conditions which demand the introduction of certain machinery which might be furnished from the United States. The consul writes:

The opening on August 1 of a new railway line 256 miles long from Colombo to Jaffna, the capital of the northern province of Ceylon, has resulted in disclosing an unexpected condition of affairs that may prove interesting to enterprising Americans desiring to extend the scope of their operations abroad. The water obtainable along a large portion of the route is very impure. Locomotive boilers so rapidly deteriorate from its use that some means of remedying this difficulty must be speedily adopted, as well as for obtaining suitable water for drinking and culinary purposes. In this connection the sinking of artesian wells has been suggested, and Governor Sir Henry Blake in a late speech at Jaffna made allusion to this subject. As, therefore, the devices of artesian wells and the cleansing of water for steaming purposes are so well known and successfully worked in America, it is not unlikely that an opening for such operations may be found in Ceylon by enterprising Americans who, if they desire to compete, might address the local government through the honorable the colonial secretary, Colombo, Ceylon.

AUSTRALIA.

NEW SOUTH WALES.

IMPORTS OF CORDAGE AND TWINE.

According to a report by Consul Baker, of Sydney, New South Wales imported binder twine, in 1903, worth $140,445; in 1904 the imports were worth only $82,185. Of articles manufactured from cordage and twines it imported for $5,920 in 1903, and for $3,505 in 1904. Of metal cordage it imported for $160,745 in 1903, and for $119,835 in 1904. Of engine packing in rope form it imported for $36,400 in 1903, and for $37,140 in 1904. Of sewing silks it imported for $603,175 in 1903, and for $603,060 in 1904. Of these, $640 worth were found unserviceable in 1903 and $105 in 1904. The cordage and twines imported amounted to 16,628 hundredweights, valued at $221,215. Of these, 2,664 hundredweights came from Victoria, and were valued at $42,375; the United Kingdom sent 8,828 hundredweights, valued at $111,615. The details of the report are on file in the Bureau of Manufactures, Washington, D. C., where interested parties may consult them.

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AFRICA.

SOUTHERN AFRICA.

NEED FOR MANUFACTURED PRODUCTS.

DEMAND FOR MOTOR CARS—KIND OF VEHICLES REQUIRED—COLD-STORAGE MACHINERY WANTED—COMPARISONS AND PROSPECTS.

Attention has been frequently called by our consuls in South Africa to opportunities that are offered in that rapidly developing country to manufacturers for the introduction of various products for which there is a present and steadily increasing demand. There seems to be a special demand for motor cars, cold-storage plants, wire fencing, and many other articles that can be readily supplied by manufacturers of this country. The British and South African Export Gazette, a monthly periodical published in London, and devoted to the promotion of British trade with South Africa, in its last issue contains an article based on authoritative information showing the urgent demand for motor cars and explaining the class of cars required. These articles, although prepared for British manufacturers, are equally interesting to manufacturers of the United States. The article follows:

The motor car and motor lorry are now established and indispensable factors in South Africa's commercial and industrial economy, but although six years have elapsed since the introduction of the first car, the supply of a mechanically propelled vehicle perfectly suited to South Africa's requirements does not appear to have been realized. According to Mr. A. T. Hennessy, chairman of the Automobile Club of South Africa, the manufacture of such a car has never even yet been attempted by home, European, or American manufacturers, owing apparently to the fact that the South African demand for these vehicles, great and growing as it is, is still insufficient to warrant departures from standard patterns. It is to be observed that these remarks apply more particularly to passenger cars and not to goods motors, as to which it is notorious that many excellent types from English workshops, constructed especially for colonial use, are already on the market.

Mr. Hennessy, who recently read a paper on this subject before a meeting of the British Association at Cape Town, is quoted by the Export Gazette on the merits of motors now offering for South Africa and on the special features of the ideal machine required for that country:

Passing in review the leading types of cars, Mr. Hennessy dismisses the electric as possessing no claim as yet to adaptability to South African circumstances, and concentrates attention on steam and internal combustion motors. In his view (which is not, however, universally

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shared) the future rests with the latter type, and either petrol or alcohol. His expert comments on the defects of construction, etc., shown in practice, are certainly valuable and should enlist the marked attention of motor manufacturers.

STEAM MOTOR CARS—ADVANTAGES AND DEMERITS.

The use of steam cars in South Africa was, it seems, prejudiced in the early days by the introduction of cheap, light American steam runabouts, badly designed, constructed of inferior material and roughly finished, and with fuel and water capacity not exceeding 25 miles. A much better car has, however, since been placed upon the market, in which the boiler is replaced by a steam generator which instantly flashes the water into steam, while the control of the fire, water, and oil is automatic. Condensers are also fitted, and the mechanism of the car has been simplified and strengthened. Nevertheless, according to Mr. Hennessy, the steam car still falls below South African requirements for the following reasons: Storage capacity for water and fuel is too small; the machinery occupies more space than that of a petrol car, thus seriously reducing available room on the car; it is also more complicated than that of the petrol car, and is more likely to get out of order, the pilot light especially giving trouble. Running costs are also greater than with an equal power petrol car. In the steam car's favor are, however, its quietness, smoothness of running, hill-climbing power, reserve of power, ability to use common petrol, etc., which will, Mr. Hennessy allows, always insure it a considerable patronage with motorists acquainted with its merits.

MERITS AND DEMERITS OF THE PETROL MOTOR.

Mr. Hennessy's comments on internal combustion motors relate solely to petrol cars, and they are, like those on the steam cars, dictated solely from the standpoint of South Africa's requirements. In the main, the defects alleged are less those of construction and material than of design. While the respective merits of low or high speed engines may remain a debatable point, experience favors the medium for South African conditions, as being more economical, giving less vibration and less wear on the wearing parts and bearings, combined with greater efficiency. In the matter of single or multiple cylinders, with a car over 6-brake horsepower the multiple cylinder gives the best results, being better balanced, producing less vibration, running quieter, yielding better hill-climbing power, and less wear of wearing parts. These offset the objections of complication of parts and duplication, as increased reliability and freedom from breakdown are insured. Separate cylinders, as offering larger cooling surfaces, so needful in a semitropical climate, are likewise preferable; while, on the other hand, mechanically-operated inlet valves are inferior to the automatic, owing to difficulty in obtaining spares in the case of a breakdown. As to cooling arrangements, those of cars introduced to South Africa hitherto have, with but few exceptions, proved totally inadequate. Climate, steepness of hills, need for constantly pulling up to negotiate the innumerable sluice and streams that cross the country roads—all combine to overheat the engines; hence the need for fitting South African motors with larger water tanks, more effi-

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cient radiators, with larger fans, and, in many cases, more powerful pumps, these last being gear-driven in preference to either belt or friction driven.

FAILINGS OF TRANSMISSION AND RUNNING GEARS.

According to Mr. Hennessy, the parts of motors which offer the greatest scope for improvement, so far as South African use is concerned, are those connected with the transmission and running gears. The clutch, in particular, should be made so as to operate very gradually, and if capable of sliding indefinitely without undue wear would add immensely to the life of the car and the comfort of the occupants. The cone-shaped leather-faced clutch, which is the one most general in South Africa, is held to be the most unsuitable that could be devised. On the other hand, the metal-to-metal internal expanding clutch, which gives no end thrust, is held to be the best for the average motor. Commendation is also accorded to the Hele-Shaw clutch, as it prevents the engine power being suddenly or fiercely applied to the gear, and allows of its slipping without injury to working parts. For the rest, the cog-wheel type of gear will remain superior to the crypto gears, so long as the latter continue unimproved, on the score of durability. In the matter of speeds, all cars over 6 brake horsepower should be fitted with four, as on South African roads it is desirable that change of speed should be as gradual as possible, while a direct drive on the top gear is not of such paramount importance unless effected without interfering with the efficiency of other gears. In South Africa low gears are of as great or greater importance than the high, and the best form of gears is undoubtedly the cardon shaft bevel gear and live axle, its advantages being noiselessness, full protection of working parts, and easy lubrication. In few cases, however, Mr. Hennessy declares, has this shaft been found sufficiently strong for South African work, either the whole shaft twisting, or the jaws breaking. The design of the live axles also leaves much to be desired, they being seldom strong enough for the work. An ideal axle is one—such as the De Dion-Bouton—having an ordinary axle to carry the weight of the car and two cardon ones to convey the power to the road wheels.

IMPROVEMENTS NEEDED IN LUBRICATION AND SPRINGS.

The springs fitted to motor cars for South African use, as also the means of lubrication, are equally open to exception. On the latter point it is declared that sufficient attention has not been given by manufacturers to the efficient lubrication of all bearings from the dashboard. Sight feed lubrication is generally fitted to the principal bearings, with force pump to the cylinders; but, if fitted at all, there should also be a pump capable of forcing oil to all bearings. The best form of pump is an automatic pressure one, with a hand pump as a stand-by, as all other pumps are too easily affected by changes of temperature and gritty matter in the oil. In the matter of springs, their vital importance, owing to the state of South African roads, can hardly, it is affirmed, be realized by motorists or manufacturers at home. Those fitted by the average maker are seldom strong enough; and it has been found very difficult to make them so without seriously interfering with their resilience and the consequent comfort of the car. But the

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increased length of wheel base which has recently become general leaves the way open to fit longer springs, with greatly increased comfort in running. Springs generally break when the backlash or upthrow occurs, when all the stress comes on the top leaf. To remedy this, clips have been fitted in South Africa on practically all cars imported for touring, sufficiently loose to allow of the leaves sliding, thus distributing the strain over the other leaves. This has proved effectual. Commendation is also awarded to the Lanchester car method of springing and suspension.

DEFECTS OF THE WHEEL BASE.

As previously stated, the increased length of the wheel base is a factor conducive to effective springing. Other points connected with the wheel base are that, for comfort, all seats, back as well as front, should be placed between and inside the base, as, if they overhang the back axle, discomfort must be felt by the riders in passing over bad roads. Increased clearance must also be allowed for beneath the car. In this particular all European models entirely fail to meet South African requirements, their bodies not being raised sufficiently from the ground to clear road obstacles. Moreover, in many districts the center of the highway is from 5 to 12 inches higher than the sides, which makes it impossible for a car with only 5-inch clearance—the maximum clearance of many cars—to proceed on them. For the same reason it is also a serious error of construction to make the fly wheel the lowest point of the machinery, and the minimum should be the bend of the front axle. The dust nuisance, as has been previously pointed out at home, is also mitigated by the increased clearance.

POINTS IN STEERING GEARS, WHEELS, ETC.

Well-designed worm and segment wheel steering gear, which is almost universally fitted to 8-horsepower cars and upward, is regarded as the best type of steering gear; but exception is taken to the otherwise excellent tiller-steering gear of a unique type made by one well-known English firm, because of its liability to be diverted by road obstacles and its dangerously ineffective control in deep sand. Some of the castings which carry the pillar, worm, and segment of gears in many machines have also exhibited defects in use. In the matter of size of wheels, uniformity for all cars constructed for South Africa is requisite in order to reduce the storage room needed for spare tires; and with regard to wheel diameter, 40 inches is a satisfactory size for cars of 10 horsepower and upward. If smaller, they take from the comfort and smooth running of the car, and if larger they can not be made strong enough to stand the lateral stress. The artillery type of wheel has proved itself most suitable for South African roads, while the wooden wheel is easier to clean and smarter looking than the wire ones, and is also held by Mr. Hennessy to be more lasting. In the matter of gearing, nearly all cars imported into South Africa are geared too high for the road conditions, and many of the smaller cars have not sufficient power for their seating accommodation. It is held that no car to seat two persons should have less than 6 brake horsepower, and for four persons less than 10 brake horsepower to enable a fair average speed to be maintained.

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THE DEMAND FOR COLD-STORAGE PLANTS.

In regard to the demand for cold-storage plants the Export Gazette says:

Too much attention can not be accorded by manufacturers of cool-storage machinery to the governmental efforts now being put forth to stimulate the formation of cooperative farmers' associations in South Africa with a view to acquiring costly machinery and more particularly cool-storage plant. Fruit, vegetables, and dairy products, raised in superabundance in the seasons in up-country districts, are, it is notorious, now largely wasted, owing to inability to find an immediate payable market; but by means of cool storage these may be kept in condition till a remunerative demand arises. Recognizing this, the goverment of the Cape has taken special measures for the assistance of the farming industry, and the secretary of agriculture has just issued the regulations, under which advances will be made to farmers' limited liability companies, formed of at least seven members, for the purpose of building and equipping cool stores. The whole sum required for such buildings, plant, and necessaries will be advanced by the Government at 6 per cent interest, provided the capital of such companies amounts to half that of the advance, and one-fifth of it be paid up within two years. This practical offer will, without doubt, be largely availed of in the Cape Colony, and especially in the western and northern districts, where help of this practical kind has long been a desideratum. Cooperation in the other colonies with a view to the erection of similar cool stores is also being furthered, and even at Delagoa Bay the erection of cool-store appliances is being mooted with a view to supplying fresh fish to the Transvaal. These concurrent tendencies make for an increased call for refrigerating appliances which will be productive of much future business to manufacturers.

TIME FOR ACTION.

OPPORTUNITY FOR AMERICANS TO ENTER A RICH FIELD—NEED FOR AN AMERICAN BANK.

Consul Snodgrass, of Pretoria, thinks South Africa a fair field for American enterprise. He points out trade and industrial possibilities in South Africa, particular emphasis being laid on the banking business and the opportunities offered in that line. He writes:

On studying American trade with South Africa, one is convinced that the time has arrived for action on the part of American citizens, both here and at home, to foster that trade to the utmost. This country possesses untold mineral wealth. It offers a great field for the right kind of men. A bank controlled solely by American capital should be opened in Johannesburg. This question has occupied the attention of a number of financiers here for two years past, and it is through one of them that I have been able to secure the facts and figures herewith given. They think that if the scheme herein set out is adopted and supported it will be successful, and that it will also be the means of securing better and more direct communication between the United States and South Africa.

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BANKING AND EXCHANGE.

The greater portion of profits made by banking institutions in this country are made up of exchange. Exchange at present is not made direct with the United States, but through London. The bank suggested would make exchange with New York direct. The step to be taken to insure this, must be the shipment of gold direct to the States, say from Johannesburg to New York. It is asserted, by an authority, in an article on the "Realization of Transvaal Rough Gold" that the banks of Johannesburg do not make profits in dealing with rough gold in the margin between purchase and sale. What can the States want better in exchange for her exports than gold which has a standard value the world over? And if by the establishment of a bank in Johannesburg the United States can obtain a fair share of the gold output of this country, it would be a factor in enabling the United States to control the gold output of the world. The highest financiers agree that the depression so recently prevalent in every part of the civilized world, was due largely and principally to the cessation of the output of gold in the Transvaal during the late war. It may be argued that the present hard times that are being felt in South Africa, though the gold output is the largest in its history, due to the bringing in of Chinese labor, would upset such a proposition, but as this country is controlled by England, and as the latter hesitates to invest during the pendency of such a war as has just been settled between Russia and Japan, it is not difficult to fathom the real cause of the present depression—hesitancy and want of confidence on the part of the mother country.

COMPARISONS.

The following comparison of figures and estimates will prove that a bank established at Johannesburg, with sound financial support in the way of capital, by the purchase of gold alone might become a pronounced financial success: Take 500,000 ounces as the probable local output of gold per month for some time to come (it will likely be much greater). What portion of this alone would be required to dispatch to the States in exchange for her exports? As a fair estimate of the monthly imports here from the United States, take the month of August last, when goods to the value of $2,117,395 arrived at South African ports. The local gold output for the same month was 271,919 ounces, or about one-half of the above estimate. Say, for comparison, that the United States export figures also doubled—and we may reasonably expect it, knowing the capabilities of our countrymen for business—the figures would then be, roughly, $4,233,835, and I feel safe in saying that one-half of the exports would be brought into the Transvaal and be mostly distributed locally. How much gold could the United States take monthly in payment for value received alone, apart from any other consideration? In answer, we may state that it would be nearly a third of the total output.

We will take the value of gold that the bank could possibly deal with each month at $2,500,000 in round numbers. One-eighth per cent (the lowest estimate) exchange profit on this monthly turnover would mean $3,000 per month in round numbers, whereas practically no capital would be needed. In saying this, I am assuming that with direct exchange American houses and merchants would take advantage of it, and not, as at present, use London.

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PRESENT PROSPECTS.

The present banking institutions in South Africa have worked successfully on practically small paid-up capital; for instance, the Standard Bank has a paid-up capital of about $6,000,000, on which it paid a dividend this year of 17 per cent. The smallest, the Natal Bank, has a paid-up capital of $2,500,000; on this a clear profit was made this year of about $500,000. It can also be stated that nearly one-third of this bank's annual profit is derived from Johannesburg. Therefore, taking these figures as a guide, financial experts confidently express an opinion that an American bank with a paid-up capital of $4,000,000 or $5,000,000 would be able to pay a dividend during its first year.

The American citizens resident on the Rand number from 2,000 to 2,500, and from these alone one might reasonably expect to find the nucleus of a sound banking business when one considers the well-known American firms that either have branch establishments here or are represented. I enumerate a few of these:

AMERICAN HOUSES IN JOHANNESBURG.

United States Steel Products Export Company, Allis-Chalmars Company, Sheriff, Swingley & Co., Chapin & Manion, General Electric Company, Western Electric Company, Remington Typewriter Company, Yost Typewriter Company, C. A. Williams & Co., National Cash Register Company, two large laundries.

HOUSES REPRESENTED.

Westinghouse Electric Company, McCormick Harvesting Machine Company, Leeycraft & Co., Boston Belting Company, Chicago Rawhide Company, Fowler Brothers., Standard Oil Company, Henry W. Peabody & Co., Armour & Co., Arkell & Douglass, Stirling Boiler Company, Flint, Eddy & Co., Jenkins Brothers, Jos. Dix Crucible Company, Gisholt Machine Tool Company, Goulds Manufacturing Company, Henry Hooker & Co., Jones & Laughlin, Singer Manufacturing Company, Kilbourne & Jacobs Manufacturing Company, Blake Steam Pump Company, Lidgerwood Manufacturing Company, Manhattan Rubber Company, Minasha Wood Split Pulley Company, New York Lubricating Oil Company, Rand Drill Company, Sturtivant Engineering Company, and many others.

In addition to any likely support from the foregoing, it may be pointed out that two well-known American insurance companies, the Mutual Life and Equitable of New York, have offices here, and as they do a profitable business, they must have large remittances to make to the States.

OPINIONS OF FINANCIERS.

Apart from exchange, it is the opinion of financiers here that an additional bank at Johannesburg would stand a fair chance of doing ordinary banking business and find it profitable, but in order to get a footing before others (there are two others now contemplated) any seriously contemplated American institution should be established here as soon as possible, as, with the Asiatic labor, new capital is finding its way here and the cessation of hostilities in the Far East has given a better tone to the market. Business in all lines is improving.

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It is suggested, too, that the bank charges in Johannesburg would bear cutting. Interest averages 8 per cent per annum, charged monthly, and in some instances more. Rates on remittances made and collected in South Africa are never less than one-eighth per cent, and the nominal charges on very small amounts work out at very high rates. It is thought a handsome profit can be made in ordinary banking business at finer rates all around, and any reduction in current rates would be gladly welcomed by the local public.

FREIGHT RATES.

INCREASE DANGEROUS TO AMERICAN TRADE.

Consul-General Washington, of Cape Town, calls attention to preferential freight rates in favor of British shippers. He sees in these rates a menace to American merchants and manufacturers. Great Britain and Canada, he thinks, have not been slow to see and to avail themselves of the new rates as well as of the preferential tariff rates now so popular in all parts of the British Empire. The consul writes:

As is known by American exporters to South Africa, the rates of freight have been recently advanced, and it is as well they should know that those with whom they have to compete are taking this into account in no idle manner. The press is calling attention to it, and a recent number of a trade journal predicts that the British manufacturer will not be slow to avail himself of this increase from (about) 20s. to 25s. ($6.08) on "general merchandise." The rates quoted on grain, timber, and oil are 18s. 6d. ($4.50), and doors, windows, chairs, fruit jars, and other, so denominated, "cheap merchandise," 22s. 6d. ($5.48). The rates to other South African ports are, practically, Port Elizabeth, 27s. 6d. ($6.69); East London and Durban, 32s. 6d. ($7.91). It is said in Cape Town that various articles of American export have grown more generally popular in the past fifteen months. With preferential treatment extended by the South African Customs Union to combat, we can not afford to be placed at further disadvantage if we are to continue to hold our share of the South African trade, or to increase it.

PREFERENTIAL TARIFFS.

Aside from the products of other more important competitors, it will be noted that Canadian exports have considerably increased under the privileges acquired by preferential treatment in exchange for that extended to the customs union. The Canadian government, evidently wishing to foster this trade, has recently agreed, subject to ratification by Parliament, to further extend her concessions to South African wines. Up to 40 per cent proof spirits the duty is to be 25 cents per gallon. The extent of this benefit will be seen, as the ordinary tariff is 3 cents per gallon for each degree above 26 and up to 40 (and Cape wines contain generally more than 26 per cent), plus 30 per cent ad valorem, and it is doubtless regarded as well repaid by the admission here from Canada of cheese, hardware, wood, oatmeal, wheat, flour, poultry, and provisions of various kinds. The freight question then calls for some attention.

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CARE IN SHIPMENTS.

I would urge the occasional shipper to be careful in making his freight arrangements. Personally, I trusted two small cases of glass to be sent from Washington to Cape Town by direct steamer from New York, stating that I wished to ascertain the precise cost for future use. My cases were sent first to England and then to East London, a port on the east coast several hundred miles beyond Cape Town, with instructions from the shippers in America to their agents at East London to collect all charges for this additional journey before delivery. Delivery entailed a reshipment, repayment of freight, dock dues, etc. The steamer called first at Cape Town en route to the more distant port. This method increased profit all around. Because the glass was a present I could not abandon it on my shippers' hands, as I certainly should have done because of the added items of cost.

The total imports into the Cape during the month of July was $15,423,340; in July, 1904, $14,360,131. The exports from the Cape show an increase, for they were for July, 1905, $15,697,333; for July, 1904, $13,417,947; a gain of $2,279,386.

Of the trade in July, 1905, 73.4 per cent of the imports were from the British Empire; of the exports during the same period 98.7 per cent were to the British Empire.

DIAMOND SORTING.

REMARKABLE RESULTS FROM A NEW PROCESS.

Consul Snodgrass, of Pretoria, calls attention to a new method of treating diamondiferous earth for the purpose of extracting diamonds. It is the Elmore system, and has been quite successful in the South African mines. He says:

The Premier Diamond Mining Company (Limited), of the Transvaal, has ordered an oil concentrator plant under the Elmore system from a large English firm, to be used in the treatment of their diamondiferous grounds. This contemplated installation is interesting as being the first application of the Elmore process for the recovery of precious stones. Many tests were made on the dumps of waste of the Premier, near Pretoria. A portion of this waste material was carefully re-sorted three times, with a view to eliminating all diamonds from it as far as this was possible of accomplishment by hand sorting; then to this specially sorted waste was added a number of known weighed diamonds. The Elmore process was then applied, with a view to determine its efficiency for recovering the added diamonds. Not only were the added diamonds recovered, but, in addition, several other stones were also found. These trials were repeated many times, and proved that 100 per cent recovery of the values was easily obtainable in every case. As a result of these experiments, the Premier Company has ordered a plant, which is expected to be in operation some time in November.

ADVANTAGES OVER PRESENT METHODS.

In addition to the advantages of the total extraction of the diamonds, the trials have shown that no preliminary sizing of the material to be

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treated is required, which is a distinct advantage over existing methods. Clean water, which is required in large quantities by usual methods, is quite unnecessary with the Elmore process, which is an important point where water is scarce, as it is in the Transvaal. Further advantages of the new process are the prevention of thefts of diamonds and the elimination of the whole of the pulsator treatment. The progress of these experiments will be watched with much interest, as they appear to be quite revolutionary. If all that is claimed be substantiated in working practice on a large scale, a most important advance will have been made in the treatment of diamondiferous earths.

The Elmore plant lends itself specially to the prevention of theft of stones during treatment, because all the diamonds are finally collected in a small centrifugal separator, which can be easily locked up, to be opened only by the responsible manager in charge, who from time to time can remove the precious stones from the centrifugal machine without their being handled by any one else. The output in the Premier mine, which, by the way, is where the mammoth Cullinan stone was discovered, has been gradually falling off for several months, the value of production being not more than one-half what it was formerly, there being great difficulty experienced in mining the property. During the last six months diamonds to the value of $3,337,355 have been found, against $3,475,795 in the preceding half year.

MOROCCO.

COUNTRY READY FOR DEVELOPMENT.

POPULATION AND TRADE—OPENING FOR AMERICAN PRODUCTS—DIRECT STEAMERS NEEDED.

Consul-General Philip, of Tangier, writes that Morocco might easily be made to take a considerable share of its imports from the United States. He favors the establishment of a line of steamships connecting the two countries and gives seemingly good reasons for such a course. The consul-general writes:

In order fairly to consider the question of Morocco as a commercial center of very considerable importance in the future, it is necessary to realize some of the natural advantages which combine to render this country a most remarkable one.

Situated at the extreme northwestern limit of the African continent, and composing one entire side of the narrow entrance to the Mediterranean, the Empire of Morocco has been compared in form to a triangle, with the city of Tangier at its apex. On the western side stretches nearly a thousand miles of Atlantic coast line, the other or northerly side borders on the Mediterranean for a distance of 300 miles, while the Atlas Mountains, extending from the Atlantic straight across the continent, form the base. It is to this chain of mountains, rising to elevations varying from 9,000 to 13,000 feet above the sea level, that Morocco owes its rare climatic conditions, which practically combine the productive capacities of a tropical country with an equable climate in the temperate zone. The cool, moisture-laden breezes,

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sweeping over the country both from the broad Atlantic and from the Mediterranean, are met by this rampart of rock and thrown back in the shape of plentiful rain, which circulates in such a manner as to render the climate a pleasant one at all seasons of the year. The Atlas Mountains efficiently protect Morocco from the dry, burning desert winds and shifting, barren sands, which cause such havoc to the lands lying beyond this range on the Algerian side.

AREA AND POPULATION.

The area of Morocco is about 300,000 square miles and the estimated native Mohammedan population is 10,000,000. The soil throughout the entire country is for the most part rich and deep and, owing to the unique climatic conditions, is capable of an immense variety of products. The winter rainfall is abundant. Seven large rivers, one at least of which could be rendered navigable, with many tributary streams, intersect the country, giving an abundant supply of water for perfect cultivation in every part of the land during long, dry summers. With proper attention and development this beautiful land will become a source of vast and varied production and a commercial field well worth the attention of the American man of business; and it may be as well to remark here that the above fact is well recognized on this side of the Atlantic, as the strong international competition for supremacy in Morocco will show.

FOREIGN TRADE.

It is remarkable that, notwithstanding every adverse condition, the trade of Morocco with foreign countries has shown a gradual and decided increase up to a period of five years ago, since which time it has made such a rapid advance, both as to imports and exports, as can be considered nothing short of wonderful.

The Moorish Government is at present on the point of taking serious steps toward the introduction of important reforms with the assistance of the various powers represented in Morocco. During the year 1903 the general trade of Morocco with other countries approached a total of $20,000,000, and I have little doubt that this amount would be doubled inside of ten years should a system of satisfactory reforms be instituted that would lead to the establishment of a degree of confidence among the people and to a proper encouragement of foreign trade.

INVITING FOR AMERICAN ENTERPRISE.

The American business man should not pass this market by unnoticed. Let him take into consideration that here is a country of extraordinary fertility and exceptional climatic advantages for the production of a diversity of products; that this country, with 1,300 miles of seacoast and numerous coast towns of considerable importance, lies only ten days from New York by slow steamer, and is separated from Europe only by the narrow strip of water known as the Gibraltar Straits; that the large native population is already dependent upon outside sources for many of their daily necessities; that, without doubt, their conservative disinclination to innovations will fast disappear with increasing prosperity; that the already considerable foreign

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population of the coast towns will largely increase with the advent of reforms; that the country is known to be rich in mineral deposits, and that its mountainous regions are still in an unexplored state. Let him think of these things, and then take into consideration that, properly speaking, there is not a single road and few bridges yet built throughout these 300,000 square miles, and that all transportation between coast and interior districts is expensive and is carried on by means of pack animals—camels, horses, mules, and donkeys. I believe, if my efforts at stating the principal disadvantages under which the Moroccan trade has been carried on hitherto have been sufficiently explicit, there will be little difficulty in drawing the conclusion that just as soon as any measures of serious reform are instituted, which, I may say, can now be considered as very certain in the near future, that the consequent opening up of the country for business operations will cause this same Moroccan trade to advance with giant strides.

NOW IS THE TIME TO BEGIN.

Lest the purpose of these remarks be misunderstood, I feel constrained to accentuate the fact that they are in no sense meant to convey the impression that it will be advisable to wait for the betterment of trade conditions, keeping but a watchful eye upon Morocco the while. On the contrary, the present is the time of all others for attention to this long neglected market. The present is the time to gain a foothold at the expense, perhaps, of considerable trouble and slow returns in the beginning, which will prove increasingly profitable as time goes on. International competition in the Moroccan trade is to-day very apparent and will undoubtedly increase, and what to-day would be comparatively easy of accomplishment will in the course of time become more difficult. There are several important American products largely sold in Morocco which are introduced by European business houses, and there are others concerning which I am confident a large sale could be in the hands of American firms if properly manipulated. The Moor is a discriminating buyer and soon detects the superiority of American over European made goods of cheap grades.

EXPORTS TO EUROPE.

It is at once apparent that the majority of Morocco's exports are more necessary to Europe than to the United States. Grains, live stock, and all other food stuffs, of which large quantities are exported, are not needed here, but many other things are produced under the ineffectual and primitive methods of the present which should find a demand in our country. The large number of seed products, which include canary seed, cummin seed, fenugreek seed, caraway seed, linseed, coriander seed, gingelly seed, etc., are worthy of notice, and among other products may be mentioned olive oil, almonds, various kinds of gums, hemp, beeswax, wool, sheepskins, hides, goatskins, etc. The last-mentioned article is at present the only Moroccan product exported to the United States in any considerable quantity, and the fact that the value of goatskins shipped thence during the half year ended June 30, 1905, equaled the value of shipments made during the entire year of 1904 would seem to indicate that in one direction, at any rate, the resources of this undeveloped country are becoming more appreciated. It is much to be regretted that, owing

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to the various methods of indirect transportation at present necessary, a large percentage of the above-mentioned article is shipped for the United States without the assistance of the various American consular offices in this country.

CHANCES FOR AMERICAN TRADE.

All herein enumerated concern the possibilities for the extension of American trade with Morocco under existing conditions, yet the all-important and vital factor in respect to the most satisfactory way to carry on business, combined with the quickest and most valuable returns, is at present lacking, namely, direct communication between the two countries. Too much stress can not be laid upon this disadvantage; and in the firm conviction that just as soon as some direct American transportation is arranged—and it need not be said that a very important necessity in bringing this about will be the interest and cooperation of a number of American firms desiring to capture a share of the Moroccan trade—there will be no doubt, as far as can at present be foreseen, of the feasibility of American control of several important imports into Morocco.

DIRECT STEAMSHIP LINE NEEDED.

The urgent and immediate need of a regular American freight steamer to visit Tangier every month, or even every two months, is very great. This line should preferably be engaged in traffic with other near-by ports in the Mediterranean or elsewhere, as the volume of trade with Morocco would in all probability be small in the beginning.

By this means American products could be shipped to Morocco with much greater advantage than now, and it is to be earnestly hoped that some such American service can be arranged without delay. The steamship service between the European countries and Morocco has been largely augmented of late and the different ports are now constantly visited by regular lines of various nationalities. Tangier is the only port in Morocco having telegraphic communication with Europe. Lying, as it does, within but a few miles of the Spanish coast, it is more important as a commercial base than other places on the Moroccan coast. The ports of Larache, Rabat, Casablanca, Mazagan Saffi, Mogador, and others are, however, all the centers of an increasing amount of trade.

THE INLAND CITIES.

The large inland cities of Fez in the north and Morocco city in the south absorb a very large portion of the foreign imports into the country, and the various caravan routes leading from the coast towns to these capitals are constantly alive with long strings of pack animals of every kind, laden with foreign goods, among which are always to be noticed candles, petroleum, sugar, and different kinds of cotton goods.

It is impossible at this time to enter into the important question of the articles most suitable for successful competition here, nor is it advisable to dwell upon the chances that appear to exist in the country in connection with the many concessions for the various measures that will undoubtedly be adopted in the future for the installation of permanent improvements, etc. It may be mentioned, however, that a

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German firm has lately obtained the contract for the completion of a breakwater mole in the harbor of Tangier, and that similar works will be undertaken in the future.

In order to successfully enter this market American exporting houses must be warned that a thorough knowledge of the class of goods finding most favor in Morocco, even to the most minute detail of each, is an essential, and this is particularly important in the case of cotton goods and other textiles.

AGENTS NEEDED.

Native American representatives having a knowledge of the Spanish language should be sent for this purpose, and it would be found that a large field for American products in Morocco and also in Spain is quite overlooked at present. Finally, it must be plainly stated that in order to conduct business operations in this country a credit system must be initiated between the exporting houses and their clients or agents in Morocco, as is the custom with all European houses doing business here. The conditions are such that the granting of from sixty to ninety days for sight payments is absolutely necessary on account of the slow business methods employed.

It is hard to see the numberless signs of importance attached to Moroccan trade by the majority of the countries of Europe and the commercial activity displayed on all sides without feeling sincere regret for the absence of American competition, but if these remarks are heeded the purpose of attracting some attention and interest on the part of American business men may result in a change and some good may come—at least a step toward the bringing about of some direct communication between the two countries which would seem another way of leading to the "American success" desired.

MARKET FOR COTTON-SEED OIL AND OTHER PRODUCTS.

I am firmly convinced of the value of the market, hitherto neglected by our exporting houses, and there is little doubt of the commercial field here being much developed and enlarged in the near future. In view of this fact, and of the great activity displayed by the various countries of Europe in firmly establishing their products in Morocco, I am exceedingly desirous of seeing American participation in this trade as soon as possible. There is no reason why American houses should not at once attain a good sale of cotton-seed oil in Morocco, which is at present introduced by English houses at enhanced prices. There are no American business houses established in Morocco. I could give the names of several European mercantile firms who could handle cotton-seed oil and other commodities from the United States, yet I can not accentuate too strongly the advantage of conducting American business through American agents in this country, where international business competition is strong.

Regular freight steamers run between British, German, French, and other ports and Tangier.

I am using every endeavor to bring about the establishment of direct communication between the United States and Morocco, in the firm belief that as soon as an American freight line initiates regular service, say one visit to Tangier every month, or even every two months, our exporting houses will be easily able to control the Moroccan market as regards certain products.

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EAST COAST.

RIVALRY OF ENGLAND AND GERMANY.

Consul Harris, of Chemnitz, Germany, writes that, according to a recent report of the English consul at Beira, the competition between the merchants of Germany and England for the trade of the east coast and interior of Africa is becoming keener every year. Thus far England has sent only the better class of merchandise to the natives of those regions, and to the few European settlements scattered throughout the different colonies. Up until a few years ago English merchants practically monopolized every branch of commerce. Germany is now making a bid for this trade, and is placing on the market a cheaper quality of goods, which is finding a ready sale. Catalogues of German-made articles of every description, giving the fullest details with regard to price, size, etc., in the currency of the country, are being sent out in large quantities. This is further proof of what German merchants are doing to advance their commercial interests even in this remote part of the world. In Africa the German trader dispenses with the services of a commissioner as much as possible. He buys for that market direct from the manufacturer in Germany at a price which is very little above the actual cost of production, and is therefore not only able to underbid his English competitor, but in many cases is satisfied with less marginal profits.

LIBERIA.

TRADE OF THE HINTERLAND—MOVEMENT OF TRADE.

Consul-General Lyon, of Monrovia, reports excellent trade opportunities in the interior of Africa, behind Liberia, in the so-called Liberian Hinterland. He writes:

The French journal Dépêche Coloniale Illustreé points out the ever-increasing importance of European trade with the Liberian Hinterland. It says there is a clientele whose purchases will amount this year to nearly $193,000, of which one part consists of products of the country, principally cows, while the other half consists of European merchandise shipped to Guinea, duties and other taxes having been paid.

At present, the movement of trade between French territories and the Liberian Hinterland, as reported in the budget of French Guinea, is between $19,300 and $28,950 a year, being almost wholly from the three districts of Sigiurri, Kankan, and Kouroussa.

The importations of the Hinterland have been slightly diminished in consequence of the very grave disturbances in the territories of Liberia.

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TRANSPORTATION.

CHINA'S GREATEST RAILWAY.

OPEN DOORS TO A RICH AND RESOURCEFUL COUNTRY.

THE LINE CONNECTING HANKAU AND PEKING—ROAD AND COUNTRY TRAVERSED—MARKET FOR MODERN MACHINES.

Consul-General Sammons, of Niuchwang, furnishes the following interesting description of the new railroad connecting Peking and Hankau, which is expected to become an important factor in the industrial and agricultural development of the section of the Empire which it traverses:

A recent trip by rail from the Yangtse River to Manchuria included passage over the 754½ miles of new railroad connecting Hankau with Peking. The journey between those cities was made in four days and three nights. No trains were then operated at night, and the average running time was from 16 to 20 miles an hour. I am assured, however, by the managers of the operating department of the road at Peking, that after the completion of the long bridge over the Yellow River, in November, the time between Peking and Hankau will be reduced to thirty-six hours. This service includes a fast weekly or semiweekly train equipped with dining and sleeping cars. It will make a new departure from the usual manner of operating oriental trains by making part of the journey at night. Even with frequent stops this oriental flyer will not have to maintain a high average of speed.

APPRECIATION OF MODERN CONVENIENCES.

Tourists will no doubt appreciate the inauguration in China of modern up-to-date train service. Thus far the managers of the new line have not encouraged travel over it. They have said they were not ready yet to handle tourists and have at times discouraged the pressing requests of women, particularly when unescorted, to make the trip between Peking and Hankau. If the travelers who have thus far used this route chartered special cars, they were allowed to sleep in them over night and thus escape the native Chinese inn, which is usually quite unsatisfactory to the occidental sight-seer or merchant. The nightly charge for the use of the special car for sleeping purposes is $10 Mexican or $5 gold.

SLEEPING ACCOMMODATIONS.

Blankets and pillows provided by the traveler are quite essential to a modicum of comfort in sleeping in these specially chartered first or

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second class cars. It is necessary, minus dining-car service, to provide meals and to employ a cook or servant, or both. A native who can speak English and who acts as cook and servant is very helpful, but with the inauguration of the dining and sleeping car service parties of tourists will not necessarily have to resort to chartering cars. The first and second class cars have as a rule five compartments. With blankets and pillows, together with additional bedding, if desired, ten people can sleep in one car. For those desiring to see the country leisurely the slow trains, stopping at all stations and not running at night, may be favored. But in that case, unless cars are chartered, not only must the party go to a native inn at night, but the trip is quite likely to be rendered very uncomfortable by the presence of undesirable passengers. When the road is completed three days and two nights, instead of four days and three nights, will be occupied in going from Peking to Hankau by the slower trains. The regular fare is charged in addition to the charter price of the car, ranging from $50 to $100 gold for the entire distance, but thus far no specific number of persons is required to travel in a chartered car. In some cases two or more persons have chartered a car at the same price as was paid by a party of five or more.

HEAVY TRAVEL ANTICIPATED.

That there will be a heavy tourist travel over the new line there can be little doubt. Those who have thus far only visited the treaty ports are said to have merely inspected the outer fringes of China. This new line and the one projected from Canton to Hankau affords travelers an opportunity of enjoying the three or four days trip up or down the Yangtse between Shanghai and Hankau, which is in itself one of the most interesting of oriental journeys. With side trips, such as are possible to Nankin, the ancient southern capital of China, to Peking, the northern capital, and to numerous other places of interest, the journey may be prolonged indefinitely, as suits the taste or inclination of the traveler.

The bulk of the entire country between Hankau and Peking is a fertile alluvial plain. Wheat and poppies (for the manufacture of opium) are apparently cultivated on large areas. In the vicinity of Hankau there are many rice fields which are tilled in small patches and irrigated on the same general plan as in Japan. In many instances water for irrigating rice fields is pumped by hand from one level to a higher one, and, as in Japan, every available inch of ground is utilized. Only in rare instances are women seen in the fields. Many of the children under 10 years of age go about naked in summer, as in other parts of China.

ANCIENT METHODS AND IMPLEMENTS.

The extent and variety of mud walls surrounding endless Chinese villages impress the traveler. The mud walls and mud houses, the grave mounds and a limitless ocean of mostly treeless and practically fenceless farming areas, all carefully cultivated and harvested by hand with ancient implements, as in biblical times, and teeming with human beings that huddle in villages everywhere, is one of the general impressions.

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The massing of the population in villages, originating with the idea of affording protection from wandering bands of thieves, especially in times of famine and crop failures, is not the only safeguard against enemies. On the Hankau side of the mountains that separate the Provinces of Honan and Houpe a number of primitive fortifications crown some of the most precipitous of the rocky heights.

The native population throughout the route has the appearance of being strong and healthy as well as contented. There were very few beggars, and these mostly what in America would be termed street Arabs. In the fields the most primitive implements are used and, aside from some of the cotton goods worn by the men, very little of foreign imported goods could be seen.

There were no advertisements of any kind along the line of the railway. At Pao-ting-fou there was seen an American cigarette sign, the only outward prominent reminder of our trade exploitation. The piles of tin cans and bottles that line the right of way along newly constructed American railroads are not to be found by the side of the new Chinese railway, and, indeed, on one occasion where a foreigner could not buy a chicken with any amount of cash the tender of an empty mineral-water bottle quickly caused the native to part with the fowl.

AMERICAN LABOR-SAVING PUMPS NEEDED.

In some parts of the Yellow River section irrigation is necessary to save the crops, and during dry spells large numbers of wells are utilized. Many of these wells are scattered throughout a single field. Two and frequently three windlasses are used at each well and the water is thus drawn to the surface in buckets. The contents of the buckets are deftly dumped into a gutter or small ditch as soon as the bucket reaches the top of the well and the weight of the bucket carries it instantly to the bottom. Immediately after it fills the man at the windlass begins turning the crank rapidly. During the latter part of last May, in the vicinity of Shun-to-fou, a blinding sand storm and hot winds by day threatened the crops. All the wells were worked to their full capacity. The sand in the air caused the sun to appear much paler than the harvest moon, and this unusual sight, together with the drifting sand on unwatered areas, aroused fears of dire crop disaster. However, whether American labor-saving pumps would prove less expensive than the use of cheap native labor at these irrigation wells remains to be demonstrated.

TRAINS OPERATED BY TELEPHONE AND TELEGRAPH.

The foreign materials used in the construction of the railroad are mostly European. Both the telegraph and the telephone are used in operating trains. A telephone apparatus supplied with a long pole containing a wire is used by the train men to communicate with the nearest station when a train breaks down in the country. One end of the wire in the pole is hooked over the telegraph or telephone wire and the other end is grounded. The train master then turns the crank and attemps to call the operator at the next station. The only test to which I saw this field telephone put proved a complete failure. The fact that the ground end of the wire was placed on the surface of a dry, dusty cart road may have accounted for this, as undoubtedly the grounding of the wire was imperfect.

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MUSCLE-SAVING DEVICE.

The Chinese coolies employed as trackmen are as a rule listless and apparently lazy. One method of escaping muscular effort in handling a shovel in track grading that seems to be very popular is a chain attachment to the shovel handle near the blade. One coolie raises the shovel and drops it into the gravel or dirt while another at the end of the chain pulls forward the shovel blade, usually only partially filled with earth, to the desired place. This device for lazy workmen appears to be a recognized feature of the prevailing method of railroad maintenance along this line. It constituted, in fact, a toy hand scraper.

The road is well ballasted throughout, and in many instances the embankments and graveling about the tracks show great care and a lavish expenditure of time or what practical constructors term "frills." But these attentions to the appearance of the property add to the pleasure of the sight-seer even though they may lessen dividends. No great engineering problems had to be overcome in constructing the line aside from the Yellow River bridge work. There are two tunnels, one 340 meters (approximately 1,115 feet) in length in the hills or mountains separating the Honan and Houpe Provinces, and another of 320 meters (1,049 feet) in length on the south bank of the Yellow River. The construction of these tunnels, and in fact of the bridge work and the roadbed, show care and thoroughness. Many bridges are being strengthened with new stone piers and suitable structural steel work.

THE GREAT YELLOW RIVER BRIDGE.

Civil engineers throughout the Far East are watching the result of the bridging of the treacherous Yellow River. The river is usually said to be 2 miles wide where the Hankau-Peking railroad management decided to bridge it. The width is 10,827 feet, and the new bridge is divided into 102 spans of unequal length, and about 6 meters (19.68 feet) above the water. The bridge is not constructed of heavy structural steel, but is of a more frail design, which, however, will apparently prove of ample strength for the light locomotives and cars in use on this road. The greatest difficulty met with was to find a suitable foundation for the piers. Quicksand was encountered, and for a time some experts feared that it would be impossible to build a safe and permanent structure. It was also found to be practically impossible to sink ordinary piling, and finally screw piling was successfully used. Although some of the piling has been sunk by machinery 40 feet into the bed of the river, there is said to be a possibility of a sudden rise in the river carrying away some of the piers. This is largely conjecture. It has been planned to drive the piling down to a point beneath the scour of the bed of the river. No caissons were used, and on account of the great width and strength of the stream, the fact that there is no solid rock foundations, that the main channel is 10 meters (32.80 feet) in depth, and that in flood periods this depth may be increased to over 14 meters (45.92 feet), has occasioned much conjecture as to the result of the bridging undertaking.

SPECIAL CARS, TRAINS, AND RESERVATIONS.

The time-tables of the road, as well as the tariffs of freight, etc., are printed in French, and the Mexican dollar is used in stating fares,

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expenses, etc., and the metric system of weights and measures is utilized. Compartments may be reserved if the company's office is given notice at least twenty-four hours in advance of the departure of the train upon which the compartments are desired. But if one to four passengers reserve compartments one extra fare must be paid. If five or more passengers make a reservation no extra charge is made. The regular rate of passage over the line is $0.02 gold per 0.621 mile first-class, and $0.01 and $0.005 for the same distance for the second and third classes, respectively. The third-class cars are uncovered, and the minimum distance a ticket is sold for is 10 kilometers (6.21 miles). Baggage, over 133 pounds, is charged for at the rate of about $0.0042 gold for 133 pounds per 0.621 mile. Special cars may be chartered, being paid for in addition to the regular passage rate and baggage excess. If passengers wish to sleep in the car they must pay $5 gold per night of twelve hours, and $0.50 gold for every hour over the twelve hours limit. The company's office must be notified, when a special car is wanted, at least forty-eight hours in advance of the desired date of departure.

FREIGHT TARIFFS.

The freight-tariff system is quite complicated. The articles likely to be shipped over the road are divided into tariffs, designated by a number, of fixed prices to the kilometer (0.621 mile) for the picul (133.33 pounds) and the ton. The numbered tariffs are also designated by classes.

[NOTE.—The consul-general furnishes a list of the tariffs, their class as freight, articles included in the tariff, and cost of shipping, which is filed with the Bureau of Manufactures.]

RUSSIA.

GOVERNMENTAL ASSISTANCE IN RAILROAD CONSTRUCTION.

Consul-General Watts, of St. Petersburg, writes that in order to encourage private enterprise and induce capitalists to invest their money in the construction of railroads in Russia, the Government has promulgated a law in virtue whereof the following privileges will be granted to private railroads which may be of economical importance to the Empire:

(1) The Government will guarantee the payment of principal and interest of their bonds and will lend other financial support.

(2) Permission will be granted to include in the construction funds of private railroads the payment of moderate interest (not exceeding 3 per cent) on shares of stock during the period of construction.

(3) After the opening of regular traffic on new private lines permission will be granted them to make a proportional division of net profits (i. e., from the balance of gross receipts after deduction of the expenses of maintenance, etc.), to be applied to the capital stock of the company and to the bonds guaranteed by the Government.

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(4) The Government's share in the profit of private railroad enterprises will be limited to a certain part of the net profit after the payment of 8 per cent per annum to shareholders, which Government share will be fixed by each company's charter separately. In connection with this stipulation it is also established that each separate charter must contain a definition of the mode of liquidation of debts which the companies may owe to the Government for any guaranteed payments.

(5) The term from which the Government will be entitled to buy out the new private railroads will be prolonged to twenty-five years from the day of the opening of regular traffic on the respective lines.

(6) Should the Government require certain rates for freight or passenger transportation on such railroads in special cases to be charged and losses are occasioned thereby to the railroad company, the Government will make good such losses.

(7) The said railroads will be entitled to receive from the Government a remuneration for whatever buildings or equipment they may supply in pursuance of the requirements of one of the imperial ministries, but not for any others supplied by said railroads.

(8) Right will be granted to such railroads to receive from the Government during a certain period, determined by their charters for each separate case, a certain remuneration for certain services rendered by the railroads, such as transportation of the mail, bodies of firemen, placing rooms at the disposal of local police, gendarmes, etc.

(9) The above enterprises will be freed from charges by the Government for the inspection, the control, the police, gendarmes, etc., of such railroads.

(10) Lines which have a local importance and which will be constructed at personal cost without issuing shares or bonds will be entitled to receive moderate loans from the imperial treasury without payment of interest.

AUSTRALIA.

LARGER RAILWAY NET EARNINGS.

In a report on the Government-owned railroads of Australia, Consul-General Bray says the roads are run in such a way as to secure net earnings amounting to many millions of dollars, $19,761,646 in 1904, and more than $22,000,000 in 1905. He writes:

The gross revenue of the railways of Australia (owned and controlled by the governments of the various States) during the twelve months ending June 30, 1905, amounted to $56,436,837, against $53,387,219 a year ago.

The working expenses in the aggregate increased $1,275,179, but this is after including $1,209,189 of special appropriations for repairs on the railways of Victoria which really belongs to previous years. Excluding this amount, the Victorian working expenses decreased by $246,873. The net revenue of these railways was $19,761,646 in 1904 and $22,745,508 in 1905.

Of the $3,049,618 increase in gross revenue, no less than $2,983,862 appears in the net revenue. Prospects favor a further improvement in the financial position of the Australian railways.

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CANADA.

INCREASED RAILROAD MILEAGE UNDER CONSTRUCTION.

Consul Ifft, of Chatham, Ontario, furnishes the following report on railroad construction now in progress or contemplated in the Dominion of Canada:

Canada is entering upon a period of extensive railroad building. The extensions that have been undertaken, and to be completed in from three to five years, will cover a total of 7,444 miles and an estimated expenditure of $182,000,000. Contracts have been already let covering 75 per cent of this total and the remainder will be put under contract as soon as the surveys are completed. The total mileage and estimated cost of construction is distributed as follows:

Canadian Pacific, 1,844 miles, at a cost of $41,650,000; Canadian Northern, 1,280 miles, at a cost of $29,000,000; Grand Trunk Pacific, 3,720 miles, at a cost of $101,600,000; Grand Trunk, 200 miles, at a cost of $4,000,000; Northern Pacific, 300 miles, at a cost of $9,000,000; Toronto to Niagara (electric), 100 miles, at a cost of $4,000,000.

In connection with this statement must be noted the beginning of electric railroad building in the peninsula of Ontario and the indications that it will be greatly extended during the next two or three years. The Chatham, Wallaceburg and Lake Erie Railroad has laid 20 miles of track from Chatham to Wallaceburg this year, and will build 20 miles more from Chatham to Erie Beach next year. Over this line it will operate some 20 cars. The Windsor and Essex is securing right of way for a line from Chatham to Windsor and expects to begin construction work next year. The Windsor, Essex and Lake Shore has a large force of men at work grading between Windsor and Kingsville, and with the exception of 3 miles of sandy road the work has been completed between Kingsville and Essex. A large gang of men has commenced grading north of Essex, and the contractor expects to have the entire line between Windsor and Kingsville ready for the steel by the latter part of this month. Ties are now being unloaded at Kingsville. Preliminary steps have been taken for the organization of a company to build an electric railway line between Sarnia and London, a distance of about 60 miles. The standard 80-pound rail will be put down on these roads and it is estimated that a total approximating 1,200,000 tons will be needed for the work during the next four years, together with 400,000 tons of small sections for car and locomotive building, switches, trestles, and bridges. The cost of equipping the lines when built is placed at $75,000,000, which, with the cost of road construction, makes a grand total of over $250,000,000. During the coming year Canadian railways will require over 100,000 tons of bridge material for renewing and strengthening bridges. The requirements of the Grand Trunk Railway alone for this purpose will amount to 30,000 tons.

INTIMATE RELATIONS WITH THE UNITED STATES.

The consulate of Windsor, Ontario, comprises about one-half of the county of Essex, its borders touching the consulate of Amherstburg and Chatham. Within its limits, located and immediately adjoining

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each other, are the city of Windsor and the towns of Walkerville and Sandwich, with their fronts lying on the broad and beautiful Detroit River, and connected with each other by continuous streets and an electric car line. The aggregate population of the three municipalities is about 25,000. Windsor and Walkerville maintain almost constant intercourse with Detroit by lines of ferryboats, which carried during the year of 1904 5,902,174 passengers. The passage requires but five minutes, except possibly in the most extreme cold weather, when the ice may cause delays, but usually the frequent trips of the boats keep a passage open and no delays are experienced. Telephone and telegraph communications are maintained by means of cables laid across the bed of the river. The Grand Trunk, Michigan Central, Pere Marquette, Wabash, and Canadian Pacific railways concentrate at Windsor, and their trains are sent back and forth from Detroit on huge car ferries, and freight and passengers are transferred from one country to the other without breaking bulk.

DETROIT RIVER TUNNEL.

The railroad tunnel now in process of construction under the Detroit River, connecting Windsor with Detroit, will further facilitate and increase the business between the two countries. The result of this intimate association and intercourse is to break down prejudice and maintain a most cordial feeling between the peoples of this part of Canada and their near neighbors in the United States. Many business men and artisans, while maintaining their Canadian residence and citizenship, find their entire employment in the United States, in or near Detroit, and several of the large manufacturing and mercantile houses in Detroit have found it to their advantage to establish permanent branches here for the purpose of supplying the Canadian trade with their goods.

TRAMWAYS.

THE UNITED KINGDOM.

MUNICIPAL OWNERSHIP POPULAR BUT NOT PROFITABLE—INCOME AND EXPENSES COMPARED.

In a report on British tramways Consul Williams, of Cardiff, Wales, calls attention to the fact that a large part of the English people favor the municipal ownership of all important public utilities, but submits figures to show that it is far from being as successful as its friends would wish. He thinks the matter of municipal ownership is one that deserves a great deal of careful consideration and expert examination. He writes:

Public ownership of municipal utilities is popular in many British towns, and recent enabling legislation has allowed the advocates of the system to make investments on a large scale. The schemes cover a multitude of utilities, some almost purely social, but the largest items have been spent on power plants and electric trams. The rate payers do not find the last named profitable in all cases. For instance,

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the Cardiff Corporation Tramways, representing a capital expenditure of $3,530,048, returned a net profit of only $101.60 for the year ending March 31, 1905. This poor showing may be attributed to two causes, excessive costs and low income. In the matter of costs, a good showing was made so far as working expenses were concerned, for although there is a payment of time and a half for Sunday work and double time for holidays, they amounted to only 5.948 pence per car mile.

RELATIVE WORKING EXPENSES.

The following table shows the relative working cost per car mile of the large tramway systems:

Town.	Years.	Working cost.
		Pence.
Glasgow	1905	5.18
Newcastle-on-Tyne	1904	7.19
Manchester	1905	6.99
Bolton	1905	6.13
Hull	1904	6.04
Nottingham	1904	6.59
Aberdeen	1905	6.53
Liverpool	1904	7.25
Walsall	1904	6.15
Cardiff	1905	5.94

It will be seen that Cardiff compares very favorably, being second only to Glasgow. The excessive inclusive costs in Cardiff were occasioned by the high loan charges, which amounted to 3.282 pence per car mile, or 33 per cent of the total expenditure. This was due to the magnitude of the capital expenditure, and herein lies a lesson for the advocates of public ownership in America. It is useless to expect any municipality to pay when the undertaking is handicapped by its capital expenditure. The low income in 1904–5 may be attributed to several causes. First, of course, is the penny fare, which reduces the revenue to a minimum. The economic conditions prevailing in this country make penny fares imperative.

DIVISION OF ROUTES INTO STAGES.

The Englishman walks much more than the urban American, both from desire as well as necessity, and a higher fare would reduce the tramway revenue very much. The year's statistics demonstrate this fact, for, of the 23,372,579 passengers carried, 22,458,194 paid the penny or 2-cent fare, and of the others only 755,876 paid the 2 penny or 4-cent fares. In order to reduce working expenses, while securing all possible penny fares, tramway managers have found it necessary to divide their routes into penny stages. This recalls a misapprehension under which many Americans labor, for the penny fare on British trams is a stage and not a trip fare. A trip of 5 to 15 miles, which can be made for 5 cents in many American towns, is not possible here, for the longest penny ride is rarely 2 miles long, while many are much shorter. The longest in Cardiff is 3,930 yards and the shortest is 2,159 yards. These are representative figures.

Perhaps the principal cause of the reduced income in 1904–5 was bad trade. This was an unexpected experience for the advocates of public ownership, and the lesson should be taken to heart by Ameri-

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cans. It appears that tramways are the first municipal utilities to feel the bad effects of hard times. Depression in trade has led to a reduction of wages in many industries, and the tramway receipts have registered these reductions like a barometer. The chairman of the British Electric Traction Company (Limited) is quoted as saying that the net profit of his company was about $97,330 less than it was last year. At the same time they noticed that all companies of that sort had issued reports containing evidences of depression in trade.

INCOME PER CAR MILE.

The following table shows the income per car mile of ten of the largest towns owning their own tramways:

Town.	Years.	Income.
		Pence.
Glasgow	1905	10.43
Newcastle-on-Tyne	1904	10.94
Manchester	1905	10.73
Bolton	1905	10.63
Hull	1904	9.61
Nottingham	1904	12.24
Aberdeen	1905	10.46
Liverpool	1904	10.67
Walsall	1904	9.00
Cardiff	1905	9.028

In comparing the income per car mile with that of American systems four or five facts must be borne in mind. Many British towns do not operate their trams full time on Sunday, and the service in Cardiff does not begin until 2 p. m. Many double-deck cars are used, 100 of the 130 cars in Cardiff being of that type. British towns are more compactly built than American towns and long hauls into the suburbs do not prevail here. Overloading of cars is not permitted, and conductors show "Full" cards as soon as a car has taken on its quota of passengers. Stops are made only at certain points, and signaling elsewhere is useless.

The exploiting of Britain for tramways is only beginning. Even London, as well as a great number of provincial towns, is almost virgin territory, and interurban electric traction lines are almost unknown. The steam railways, which have catered so well to the traveling public in the past, and the many conservative regulations in rural districts, have combined to retard the growth of traction lines, but the present movement, having for its aim the recolonization of England, will bring the electric tram into favor. It in turn will open a way for the profitable investment of millions of pounds.

LIVERPOOL.

FARE REDUCED, SPEED INCREASED—POPULARITY OF THE TRAM.

Consul Griffiths, of Liverpool, England, reports on the experience of that city in the management of its tramways during the past eight years. He notes especially the reduction of fares, increase in speed and wages to employees, and general success of the system. The

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electric tram car is rapidly growing in popularity and is developing into a serious competitor of the English railroads. The report follows:

At this time, when there is so much discussion in America concerning the municipalization of public utilities, it may be interesting to know something of what has been accomplished by the tramways of Liverpool since 1897, when they became the property of the municipal corporation. In considering the advisability of municipal ownership in America, based upon the results of such ownership in Great Britain, the fact must not be overlooked that many men in all the larger English cities are not only willing but anxious, after they have secured a competence, which need not necessarily be a large fortune, to withdraw partially, or altogether, from the active responsibilities of business, and devote themselves without reserve or thought of compensation to civic affairs. Wide experience, sane judgment, and strict honesty, are thus secured for the service of the municipality without the expenditure of a single dollar. This statement applies, of course, only to those who act in an advisory and overseeing capacity. While tramway employees receive smaller wages in Great Britain than they do in America, it must be borne in mind that electric cars, as a rule, carry more passengers and travel faster in American than in English cities, and that the motormen and conductors work longer hours.

PUBLIC AND PRIVATE OWNERSHIP.

In 1897, the last year of private tramway ownership in Liverpool, 38,409,084 passengers were carried, and the gross receipts were $1,413,035. In 1904 there was an aggregate of 116,642,563 passengers carried, and the receipts were $2,628.531. Otherwise stated, three times as many passengers were carried in 1904 as in 1897; the mileage was doubled, and the receipts were increased nearly 90 per cent. Much of the increase is to be attributed to the electrification of the tramway system and to the natural growth of population, but much is also due to economical, judicious, and wise management. Since the city has operated the tramway lines the fares have been reduced nearly one-half; the length of the stage (the distance for which a single fare is charged) has been increased three-fold, and the average speed has been advanced from 5½ miles to 8 miles an hour. The tramway employees were paid about $194,400 more last year than they would have received under the scale of wages which prevailed under private ownership, and in addition proper provision has been made for their recreation and amusement and in case of sickness. An old-age pension is now being considered.

IMPROVEMENTS MADE.

Under municipal ownership, in the brief period of seven years, notwithstanding the reduction of fares, the increase in mileage, and the advance in wages, the property has been kept in good order; all necessary fixed charges and operating expenses have been paid out of the current revenues; the sum of $2,846,186 has been set aside as a sinking-fund reserve, renewal, etc.; $490,860 has been contributed to the relief of the rates, and the capital obligation has been reduced by $539,460. This is certainly a remarkable demonstration of what can be effected by intelligent and conservative and at the same time

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progressive municipal management. The use of the tram lines during certain hours for the hauling of freight, especially agricultural products, from the outlying districts, as is the practice in America and on the Continent, is being strongly urged by several members of the Liverpool tramways committee, and a freight service will probably be inaugurated in the near future.

POPULARITY OF TRAM CARS.

The increasing popularity of the electric tram car in Great Britain is shown by the annual railway returns recently published. In 1903 there were only five and one-half millions more third-class railway travelers than the previous year, while the tramways showed an increase of 287,496,000 passengers. The gain in 1904 in third-class railway passengers was a little over 6,000,000, but the tramways gained over 117,000,000 passengers. Since 1890 the tramways have carried each year more passengers than have been carried in the third-class railway cars, and last year the excess was over 700,000,000. An appreciable portion of this excess is from persons who, having the choice of railway trains or electric tram cars, give the preference to the latter. The English railway companies admit the serious character of this competition.

EDINBURGH.

OWNED BY THE CITY—PROFITABLE LEASE.

Consul Fleming, of Edinburgh, furnishes the following on the operation of tramways by the municipality of that city.

Edinburgh tramways.—Prior to 1893 the tramways in this city (all horse-car lines) were owned by a private company. In that year they were purchased by the municipal corporation for $1,654,610, and in the following six years were converted to the cable system. The total cost of the 21.68 miles (double) of cable tramways, including equipment, power houses, street widenings, and purchase price to the private company was $6,326,450. The entire system was leased to a private company in 1899 at a rental of 7 per cent of the total expenditure of the city on tramways account, the lease fixing the maximum rate of fare to be charged on the basis of 2 cents per mile. The lines have been yielding a net profit of considerably over £100,000 ($486,650) per annum. For the current year the gross receipts are expected to exceed £255,000 ($1,240,957). In regard to the value of the tramways to the corporation, the town clerk of Edinburgh says:

"The results attest that the undertaking has capacity for expansion of traffic and forms an asset of enormous value. With the exception of a sum of $26,765 per annum, which is paid out of the tramway rent as a contribution to the city rates in lieu of rent for the streets, the net rent is being applied in meeting the interest and providing a sinking fund for redemption of the tramway debt. If that course is continued until the lease terminates, the greater part of the tramway debt will have been redeemed from the tramway revenue. If the same traffic could have been carried on, and presumably the same profit earned, by a system which cost only one-half of the cable expenditure, then the lessees would have had upward of $194,660 per annum of clear profit,

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which they now pay in rent to the corporation. It is not so much the corporation as the lessees who are to be commiserated, if it be the fact that one-half of the expenditure was unnecessary. The lessees plainly do not believe this. With care in the selection of tramways to be constructed and prudence in capital expenditure there is every prospect that the result will vindicate the wisdom of the corporation in keeping the ownership of the tramways in their own hands and not giving it up to companies. The city rates have not been called upon to pay anything for tramway purposes, but, on the contrary, they have received about $194,660 in contributions to the rates, in addition to being relieved of the expense of certain street widenings, and of the formation and maintenance of the streets, so far as within the tramway rails and a certain distance outside."

The fares charged by the operating company average somewhat less than 2 cents a mile for distances exceeding 1 mile. For short distances—1 mile or under—the charge is 2 cents. Roughly speaking, tramway fares are from 50 to 60 per cent higher in Edinburgh than in Liverpool or Glasgow.

CANADA.

ELECTRIC TRAMWAYS NEEDED.

Consul Culver, of London, Ontario, thinks there is a good field in his district for the sale of material for electric tramways. He writes:

In this active, enterprising, thickly populated part of the Dominion, where factories flourish and where the best of local markets exist, there is an important feature of modern commercial and industrial life which is noticeably lacking, and that is interurban electric roads. The towns and cities are supplied with good electric lines, but there are few interurban lines in Ontario. In this consular district there is one completed road, some 12 miles in length, between the towns of Woodstock and Ingersoll, and a line some 30 miles in length under construction, running from this city to Port Stanley, on Lake Erie, but I know of no other lines in western Ontario, except the line from Windsor to Amherstburg; and yet the entire country in every direction is thickly populated and filled with thriving towns and villages. London is the industrial center, the market for all this territory, extending for some 60 to 100 miles in every direction.

I know of no better nor more enticing field anywhere for interurban roads than in this consular district.

ARGENTINA.

CONCESSION FOR UNDERGROUND ROADS.

Argentina has passed a law providing for the construction of a system of underground railroads in Buenos Aires. A copy of the bill was furnished by Minister Beaupré through the Department of State. Under the provisions of the bill the municipality will be authorized to concede the construction and exploitation of a system of underground electric railways for the service of the city and such other branches as

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may in succession be deemed advisable. The terms of the concession are as follows:

First. The contracting party shall construct the works at its own expense and in accordance with the plans approved by the Executive.

Second. The contracting party shall also pay for all lands expropriated for tracks, stations, shops, etc.

Third. The contracting party shall administer and exploit the lines at their own expense and risk for a period of not more than forty years, at the end of which time they, with all their tracks, stations, shops, rolling stock, etc., shall become the property of the municipality.

As in the case of the projects reported in my Nos. 209 and 210, all material intended for the construction and exploitation of these lines shall be admitted free of duty.

It is reported that German capital is already interested in this matter, which, I believe, is one of great importance and promise.

MOTOR CARS.

WALES.

STEAM SUBSTITUTED FOR ELECTRICITY.

The county of Glamorgan, in south Wales, is one network of steam railways, whose principal business is the handling of coals to the seaboard. These systems, together with the rigid regulation of railway crossings in Great Britain, make the introduction of electric interurban trains impracticable; but inasmuch as the country had a population of 860,022 in 1901, it has become necessary to improve upon the old methods of handling the passenger traffic, and for that purpose the steam motor car has been introduced in several places as a substitute for the electric tram. About a year ago the Alexandria Docks and Railway Company placed one of these cars on their line between Caerphilly and Pontypridd, and the experiment proved so satisfactory that a second car was placed on the same line September 28. This car, which is described as being 64 feet 11 inches in length and weighs 35 tons, is the finest yet put upon the railways in this country. Steam is generated in a locomotive type of boiler, which is fitted with Drummond water tubes. The cylinders are fixed on the outside of the bogie frame plates, and the water tanks, containing 350 gallons, and coal bunkers, having a capacity of 1 ton, are placed on each side of the boiler and are carried on the underframe of the carriage. The steam regulator and reversing gear are worked from either end of the car, so that the driver has at all times a clear lookout in the direction in which the car is traveling. In addition to steam brakes, powerful hand brakes are fitted to the wheels of each of the two bogies upon which the car is carried.

There is seating accommodation for 54 passengers. The seats, which are placed longitudinally, are plaited rush matting over springs. Passengers enter by a sliding door from a vestibule at the rear end, and, in addition, doors are placed on each side of the carriage to facilitate expedition when dealing with heavy traffic. Electricity, generated by a De Laval steam turbine dynamo placed on the footplate, is

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used for lighting the car. Numerous substations have been established for the accommodation of passengers, just as in the case of interurban electric trams, and the service seems very acceptable.

PORTUGAL.

STATISTICS OF AUTOMOBILE TRADE.

Writing of the automobile trade in Portugal, Consul Thieriot, of Lisbon, gives statistics of imports of automobiles by countries and the names of the larger dealers. He writes:

The total imports in 1901 amounted to $37,915 for 20 machines, 18 of which were furnished by France. In 1902 the number was 51—36 from France and 5 from Germany—the total value of which was $66,470. In 1903 the total value was $212,531 and the number of machines 118, of which France furnished 80, Italy 10, the United States 13, and Germany 3.

In 1904 109 machines were imported, worth $229,265; in 1905, to May 31, 42, worth $81,125. There is no record of origin, but it is fair to assume that a large part came from France, although Italy is doing much in the manufacture of automobiles.

The duty on finished automobiles is $120 and unfinished $70.

The principal firms engaged in this business are, in Lisbon:

A. Beauvalet & Commandita, 31 Praça dos Restauradores; Sociedade Portugueza, 4–26 Rua do Jardim do Regedor; F. Street & Co., 156 Rua do Poço dos Negros.

In Oporto: Teixeira & Irmão, Rua da Sã da Bandeira; Empreza Automobilista do Porto, Rua de S. Lazaro; João Garrido, Rua de Passos Manoel.

MANCHURIA.

UTILITY OF MOTOR BOATS RECOGNIZED.

Consul-General Sammons, of Niuchwang, China, writes as follows regarding use of motor boats in Manchuria:

Though the current of the Liao River at this port ranges from 3.4 to 7.8 nautical miles per hour in swiftness, according to the season and the state of the tide, motor boats will, it is believed, prove useful on it, and a number will possibly be purchased during the coming year. The river is subject to a heavy tidal rise and fall and this causes a strong inward and outward current. About the last of November or early in December the river closes, and becomes free of ice, as a rule, in March, and during this interval of approximately three months motor boats may be housed. The foreign population of Niuchwang being about 300 not including the Japanese, the demand for motor-driven boats is not likely to reach to any great extent, though motors for converting sail and rowboats into power boats may ultimately find an extensive market among the native population.

Port Arthur, Dalny, Harbin, and other points are suited to motor-boat service, but at the present time the limited foreign population and unsettled conditions generally do not warrant expectations of important trade advances in this line, although there is discussion as to the ultimate utility of the motor boat both for purposes of pleasure and recreation, as well as for inland passenger carrying and commerce.

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STEAMSHIPS.

RIVALRY OF ENGLISH AND GERMAN LINES.

A report by Consul-General Guenther, of Frankfort, Germany, quotes the Cologne Gazette in regard to the shipping movements of Germany and England. He refers to Germany's successful efforts to secure the supremacy in ocean transportation by Germany's leading lines. He writes:

The Cologne Gazette, one of the leading newspapers of Germany, says that in no department has the progress made by Germany within the last decades been so obvious as in the merchant marine. While in 1884 the Hamburg-American Line had registered only 60,000 gross tons, it has now an ocean steamer fleet of 719,000 gross register tons. The North German Lloyd's tonnage in 1884 was 103,000 gross register tons; in 1905, 676,914 tons. These lines stand now at the head of all ocean transportation lines in the world. The largest foreign company, the British India Steam Navigation Company, has only 446,000 gross register tons. This success is due to the establishment of regular steamship lines to all parts of the world and to governmental aid in the form of subsidies.

TURBINE SHIPS.

England, Germany's great rival, is to have turbine ships. These will surpass the Lloyd steamer *Kaiser Wilhelm II*, with its 19,400 register tons, by about 6,000 tons. They are to have 70,000 indicated horsepower. The trial trips of these steamers will be watched with great interest in Germany, because German engineers are of the opinion that the advantages which the turbine doubtless possesses in some respects are not so great for fast steamers that it would be justifiable to abandon the piston engines, which have always done good service. For this reason the North German Lloyd has specified for its latest fast steamer, *Kronprinzessin Cecilie*, the same conditions and measurements as at the time for *Kaiser Wilhelm II*. The Hamburg-American Line has discontinued the building of fast steamers, and will hereafter build steamers of even larger dimensions, which will, however, have only a speed of 17 miles per hour, but greater comforts for passengers and lower passage rates.

NEW ITALIAN LINE.

Consul Dunning, writing from Milan, says that the Navigazione Generale Italiana, which is now maintaining a service of four steamers between New York and Mediterranean ports, has placed contracts for four new and much larger ships, to be constructed in eighteen months at Genoa, Palermo, and Ancona. These ships are intended to enter the trans-Atlantic trade in competition with the best and fastest steamers, and it is the intention of the company to reduce the time of the voyage from New York to Naples, now requiring thirteen days. The ships will be equipped with wireless telegraph service, dining rooms for children and nurses, and passenger elevators (electric) running from the lowest berth deck to the upper promenade. Though the tonnage of the ships is not stated, it is understood here that they are to be something over 12,000 tons.

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CANALS.

PROPOSALS INVITED FOR CONSTRUCTION IN ARGENTINA.

Minister Beaupré, of Argentina, reports that it is proposed to construct a system of canals, to be built by private capital for the national government, by which the port of La Plata will be connected with that of Buenos Aires. A bill for this purpose has been prepared and sent to Congress, the main features of which are as follows:

The canal is to begin at the entrance of the port of La Plata, and to be built in two sections, the first to extend from the port of La Plata to that of the capital, the second to connect the port of the capital with the river Parana de Las Palmas. It is to be 7 meters and 92 centimeters (=26 feet) deep. The docks, in amplification of the existing ports, are to be 10 meters and 36 centimeters (=34 feet) deep, and capable of being deepened to 11 meters and 58 centimeters (=38 feet) without injury to the walls. At its bottom the canal is to be 40 meters wide throughout its first section and 35 meters throughout its second section, and within the defenses of the canal there shall be sufficient space in both sections for the doubling of its width at any time without interruption to navigation. Payment for the work is to be made in the same manner as described in my No. 209 of this date, by monthly certificates bearing interest at 5 per cent per annum, which, when the section of the work to which they relate shall have been completed, shall be exchanged for a single transferable certificate or internal bonds bearing interest at 5 per cent and amortization at 1 per cent per annum. And, as in the case of the port works at Bahia Blanca, bids for the work will be received during a period of not less than six months. Also, as in the case of the port of Bahia Blanca, all materials shall be admitted free of every internal impost.

RECLAMATION OF LAND.

On the land gained from the river or otherwise, which shall always remain the property of the State, but may be let out for a term of from five to fifty years, it is planned to construct basins for the service of the fiscal establishments and deposits to be built thereon, and separating them from the territory of the Province of Buenos Aires there are to be two strips of land for neutral railways and public roads. Such establishments are coal deposits, stores of inflammable substances, flour mills and grain elevators, wharves and appliances for the embarkation of cattle, insalubrious establishments, and all industrial establishments which it is desirable to have removed from the inner docks.

This plan is the work of Señor Eduardo B. Madero, the engineer of the present port of Buenos Aires, assisted by Messrs. Hawkshaw and Dodson and other well-known engineers. Its purpose is more than to increase the port facilities of the capital; it is to give deep-water access to the port of the capital and to that of Rosario, which is situated some 240 miles above the capital, on the river Parana, and is the second port of the country in importance.

The probable or maximum cost of such a canal is not mentioned in the bill, but is estimated elsewhere at $25,000,000 to $30,000,000 gold.

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THE TARIFF.

GERMAN EXPECTATIONS.

FUTURE TRADE RELATIONS WITH THE UNITED STATES—UNITED STATES CUSTOMS METHODS CRITICISED.

Dr. Heinze Potthoff recently delivered a lecture at Munich on "Our future trade relations with the United States of America," which contains utterances that will interest our business men as well as those public men who will be called upon to deal with the conditions that will arise under the German tariff which will become operative March 1 next. Consul Wright, of Munich, furnishes the following synopsis of Professor Potthoff's lecture, which was delivered at the request of the Bavarian Industrial Association:

Professor Potthoff stated that the feeling which was noticeable among industrial circles, that as Germany had now concluded trade treaties with her European neighbors they could look forward to several years' peace, was erroneous, as the most important work is yet to come, viz, the negotiation of a treaty with the United States. Only on account of North America, said Professor Potthoff, was our trade and industry agreeable to a high-protective tariff for farming interests. Now, however, that the protective-tariff movement has grown above the Government's head a kind of remorse has taken hold of industrial circles. The tariff would have its hardest test in connection with America, and Germany should consider herself lucky if she were protected from serious economical disturbances.

North America has a much higher tariff than Germany, but in spite of this fact Germany's exports to North America were much larger than those of all other States. The exports from the United States to Germany were, however, still larger. Germany's complaints against North America consist in the manner of coll cting the duty, in the severe application of the ad valorem duty, and the general "chicanery" which greatly injures respectable trade. These facts are also responsible for the enormous amount of smuggling which takes place to the United States, the amount of which is estimated at $25,000,000 yearly. The chicanery on the part of North America is, however, but an answer to our regulations with regard to the importation of cattle, meat, and fruit, etc., from the United States.

A FAR-REACHING QUESTION.

The question is now how these difficulties can be abolished. On the part of the chambers of commerce it is demanded that Germany should have the "most-favored-nation" advantages, reduction of the American

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tariff to the same basis as the German, calculation of duty on weight instead of on value, and a revision of the laws on patents and copyrights. It is hardly to be expected that Germany can obtain such a treaty, as America will hardly be inclined to reduce her tariff 50 per cent just to oblige Germany. As America's financial system is calculated to a great extent upon the customs receipts, such an alteration would mean a complete revolution of the national financial working. German farmers can very simply say that in case America is not willing to make these concessions Germany should show her horns; i. e., should enter upon a tariff war. This opinion is also, strangely enough, sometimes heard in industrial circles, as it is stated that America has far more need of Germany than Germany has of America. It is true that we are America's second-best customer, while America is only our third best, but this manner of taking the trade as a whole is of no importance.

EFFECTS OF A TARIFF WAR.

The question is, What do we import and export? Two-thirds of all American exports to Germany consist of raw materials, as cotton, sugar, petroleum, etc., which Germany greatly needs, but Germany's exports to America consist mostly of manufactured goods, as textiles, printed goods, glass, leather, colors, toys, and beer. We must not forget that America could buy these goods from other countries, and further, that Germany earns millions yearly on the carrying trade between Germany and America. If, for instance, America were to add 10 per cent to all goods carried on German ships, this would greatly injure our trade, and England would immediately take advantage of this state of affairs. It would also have a great effect on the passenger trade between the two countries. A tariff war with America could bring the most serious consequences to every German industry, and it would be questionable whether we could again attain our present position.

ABOLISH CHICANERY.

It would certainly be an advantage if America could be induced to abolish the present "chicanery," but it is only possible to force a country to reduce its tariff when all others unite to attain this end. Our new trade treaties are, however, the greatest hindrance to this, as they themselves are a sort of chronic, latent tariff war. In any case America will be forced sooner or later to alter its tariff, as it will find that under present conditions it can find no sufficient market for its products. It is better to prepare the way for this result than to hinder it. The best treaty we could obtain with America would be "the most favored nation" on both sides, a favoring of German shipping and further protection for German patents and copyrights. It should be the aim of our Government to attain this end. Above all, we should obtain a clear and definite treaty, the provisions of which would be free from doubt and clear to both parties.

The speaker gave warning against trying to embitter the Government as was done by the agricultural interests, as otherwise the industrial and commercial interests would have to pay for the agricultural advantages. The treaty to be concluded with North America he thought would not quite satisfy industrial interests, and still less the agricultural.

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SPAIN.

DUTY ON WHEAT REESTABLISHED.

Consul-General Ridgely, of Barcelona, writes that the Madrid Gazette of the 13th of September publishes a royal decree reestablishing the import duty on wheat to 6 pesetas per 100 kilos and on wheat flour to 10 pesetas per 100 kilos, as provided for by the law of the 14th of March, 1904. The accompanying preamble states that in order to counteract the high prices ruling in Spain for wheat and flour the import duties were reduced on the 14th of March, 1904, to 6 and 10 pesetas, respectively; that, although this measure prevented any further rise in price, it was unable to bring about the reduction desired, and it was therefore found necessary on the 6th of April last to issue a royal decree still further reducing import duties to 4 pesetas per 100 kilos on wheat and to 7 pesetas per 100 kilos on flour, these special duties to remain in force so long as the average price of wheat in Castile were over 28 pesetas per 100 kilos, the current price in the wheat markets of Valladolid, Salamanca, Zamora, Palencia, and Burgos being taken as the market price for native wheat regulating this decree; that, the average price in the aforementioned markets during the month of August having been 27 pesetas 47 centimes for each 100 kilos, the provisions of the law of the 14th of March, 1904, require the import duties on flour and wheat to be raised accordingly.

CANADA'S TARIFF INQUIRY.

VARIOUS REQUESTS FOR RELIEF AT MONTREAL.

Commercial Agent Beutelspacher, of Moncton, New Brunswick, furnishes the following epitome of claims for relief that were made to the Canadian tariff commission by representatives of various business interests at Montreal:

The Cigar-Makers' Association wants the duty on raw leaf tobacco reduced to $6 per 1,000 cigars. It is now about $8.

The tobacco manufacturers asked that they be given free licorice, glycerin, and spirit. The shirt and collar men said they had suffered severely from American and Austrian competition, and in consequence had not been able to increase their output in five years. They asked for an ad valorem and specific duty figured at 52 per cent.

The Montreal Piano Dealers' Association stated that there were no cheap or high-grade pianos manufactured in Canada. All were of medium grade. They suggested that the duty upon these classes of instruments should be placed at 20 per cent.

Protection was asked for market gardeners during the months of May and June.

The wholesale dry goods association asked that the full British preference be restored on some lines of British woolen goods that are not manufactured in Canada.

The cotton manufacturers stated that they could not hope, even under most favorable conditions, to retain their business under a duty

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of 16 per cent. They asked for an increase of duty on grays and whites of 5 per cent.

Sewing-machine makers complained that a cheap grade of machine, upon which the manufacturer did not dare place his name, was being sold to Canadian dealers below cost, and was ruining the Canadian market. They requested that a prohibitive duty be placed upon this class of machines.

The steam-engine industry was represented as being in a most precarious position, and an increase of duty from 25 to 35 per cent requested.

An importer of Russian sugar asked that the tariff be arranged so as to give him a chance to sell his wares in Canada.

Wholesale grocers requested that raisins, currants, etc., be placed under the same classification as teas and coffees—that is, if imported direct from place of growth they be allowed to enter on such a basis as will prevent their reimportation from the United States. In the case of teas and coffees, they are allowed to enter free when direct from the place of growth, whereas if brought in from the United States on other than a direct bill of lading they are subject to a duty of 10 per cent ad valorem.

The merchant tailors ask that the duty on fine worsteds and tweeds be reduced to 25 per cent ad valorem in place of 30 per cent as at present.

Manufacturing jewelers asked that raw material, such as silks, velvets, velveteens, and leather embossed paper, be admitted free when used for this purpose. They stated that the German finished products, despite duty, surtax, and freight, sell from 15 to 20 per cent cheaper than the Canadian.

Electric switch companies desire, as they were subjected to severe competition from American manufacturers, that slate and fiber, to be used in manufacture of electrical goods, should be admitted free.

The Dominion Cartridge Company also advocated a change in duty on shot shells. They stated that they would have discontinued the manufacture of these shells had it not been for the hope they entertained of receiving a higher duty.

MANUFACTURERS ASK FOR INCREASED DUTIES.

At the sessions of the Dominion tariff commission held at London, Ontario, several deputations of manufacturers were heard and asked for an advance in customs rates. Consul Culver, of London, furnishes the following epitome of the hearings at London:

The organ manufacturers were in the main satisfied with the present tariff of 30 per cent ad valorem, yet advocated a lower tariff on raw materials. It was stated that the organs coming in from the United States were of the best class, and the Canadians therefore were not opposed to them. No Canadian organs are sent to the United States, owing to the high duty.

The cap manufacturers, of which there are 6 in this city out of 24 in the Dominion, represented that they were working at a disadvantage. The duty on woolen goods coming into Canada is 30 per cent, whereas on caps made of woolen material the duty is but 20 per cent,

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making a difference of 10 per cent against the manufacturer. It was impossible to escape the duty by importing from England, since Germany supplies the bulk of the trade. All woolens come from England, all felts and buttons from Germany. They claim they are the only industry in Canada which pays a higher duty for the raw material than for the manufactured article, consequently they want the duty on caps raised, or the duty on raw material lessened.

The druggists represented that surgeon's gloves, used by doctors and nurses in operations, are imported in large quantities, paying a duty of 35 per cent, and since these gloves are not made in Canada they ask that the duty be lowered to the 20 per cent level for common gloves.

By the agriculturists it was shown that the capital invested in the 185,000 farms of Canada was four times as great as the capital invested in manufactories. The fact that $102,000,000 are paid out by manufacturers for wages annually, as against $24,000,000 paid by farmers, was met by the claim that farm work was done by the family, largely, rather than by hired help. It was clear from the sentiment expressed that the farmers of the Dominion favor reciprocity with the United States, a tariff for revenue purposes only, and British preference. They demand a lower duty on sugar, woolens, and buggies, while it was claimed that the present conditions of the labor market are such that the beet-sugar industry can not flourish; and they generally favor the abolition of all duties on cereals which are produced in Canada, and their products.

UNITED STATES LAW URGED AS A MODEL.

Consul Ifft, of Chatham, reports that the Dominion Trades and Labor Congress which convened at Montreal in October authorized the executive committee to present the views of the congress to the Canadian tariff commission for the purpose of favoring a general increase of the tariff on manufactured goods coming into Canada. The address was presented to the commission at Montreal. The petitioners refer to the United States tariff as a model that should be studied by the commission. The address of the executive committee which accompanied the petition follows:

"We would suggest that the commission, after taking evidence throughout Canada, should make a careful study of the United States tariff. By doing this many mistakes will be avoided, for the Americans have been in business longer than we have and the Congress of the United States has been very careful to guard the interests of the American workmen in making the tariff. One of the principles upon which the United States tariff is based is that the degree of protection should depend, to a great extent, upon the amount of labor expended in producing any article. We do not say that our tariff should in every case be exactly the same as the United States tariff, but we think that Canadian workmen need just as much protection as American workmen, and perhaps more, for our industries are newer and not so well established. At present Canadian workmen have far less protection."

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NEGOTIATIONS WITH AUSTRALIA.

Consul-General Bray, of Melbourne, Australia, reports that the prime minister of Australia has received from the governor-general of Canada an inquiry as to whether Australia would be willing to enter into negotiations with Canada with a view to establishing preferential trade relations between the two countries, and, if so, whether the Australian government would be prepared to offer stated tariff concessions to Canada, or would prefer to make the subject one for consideration at a conference between delegates representing the Canadian and Australian governments. The Australian government has the matter under consideration.

WEST INDIES.

IMPORTATIONS OF TOBACCO, AND CUSTOMS DUTIES.

Consul Clare, of Barbados, West Indies, writes that the duty on manufactured tobacco entering those islands is 36 cents per pound, if in packages of more than 80 pounds; if in packages of less than 80 pounds, 48 cents. The duty on leaf tobacco, he continues, is 24 cents per pound; and if in outer packages of less than 50 pounds, 36 cents per pound. A surtax of 20 per cent is imposed on all import duties. The importations of manufactured tobacco for the year 1904 were as follows:

Whence imported.	Pounds.	Value.
Great Britain	24,420	$4,584
United States	9,202	1,840
France	5,240	1,048
Other countries	11	2
Total	38,873	7,774

The following shows the importations of leaf tobacco:

Whence imported.	Pounds.	Value.
United States	47,967	$3,837
British West Indies	3,970	318
Great Britain	3,630	290
British Guiana	2,000	160
Total	57,567	4,605

There are no discriminating duties imposed on American manufactured or leaf tobacco. Twist tobacco is manufactured in this island by the Barbados Tobacco Company, the proprietors of which are Barnes & Co. The price at which their twist tobacco is sold is 52 cents per pound. This company has been allowed to manufacture tobacco without a license or an excise duty, only a parochial tax being imposed on the volume of business transacted by them. I am informed that the legislature has the matter of a tax under consideration, and it will be discussed at the next meeting of the house of assembly, with the view of imposing a license and an excise duty on all tobacco manufactured in this island.

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COTTON.

JAPAN'S INDUSTRY.

SERIES OF SUCCESSFUL YEARS—EXTENSION OF MILLS—INCREASING EXPORT OF PRODUCTS.

Few fields present so many interesting phases of industrial and commercial life as are to be found in Japan. In numerous ways, seemingly heavily handicapped, the Japanese have succeeded in securing a success not only in war, but in manufacturing and marketing goods, almost as phenomenal as that won by their arms in Manchuria and on the Pacific. As far back as 1898 Mr. Dickie, manager of the Union Iron Works, San Francisco, visited Japan. After his return to the United States he lectured on what he saw. He had unusual privileges and facilities for examining the industrial, social, and economic conditions of the country. His views were then and are now at strange variance with the views of agents sent thither to see how soon American industries were to be brought into competition with that country. So important is this matter that the following extract from one of his addresses may be given here:

JAPANESE COMPETITION.

"We may now come to a question that has agitated the manufacturers of this country and of Great Britain for some time, and has been used in this country as a political argument—that is, the question of Japanese competition in various lines of manufacture that have to some extent been established in Japan. The Japanese are expert weavers, and when cotton mills began to appear in Osaka there was no lack of skilled labor of the most efficient kind to do the work, and at a very much less cost than was possible either in Great Britain or America. The establishment of cotton mills has heretofore been a very profitable enterprise in Japan, and a large part of her own wants in this line are now supplied from her own mills. Yet Japan must come to this country for the raw material. She is also branching out in many other lines of manufacture, and nothing that this country or Great Britain can do will prevent them from doing for themselves what they can do cheaper than others can do for them.

"What did we force our civilization upon them for but this very thing, and why should we complain at the result? But we need not be alarmed.

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JAPAN'S POWER DOUBTED.

"Japan is not to be such a powerful factor in the industries of the world as recent writers would make us believe. As she develops in wealth her people will develop wants that they never knew of before. We are told that these people can produce cotton cloth for the world. When they are able to send us the material for our white shirts and dainty calico dresses will they be satisfied, think you, with only a loin cloth for themselves? The leaven is now working in the social mass of the Japanese people that will raise all the questions for her to solve that have confronted other people, and her people will demand what others have, and that will make enough for her mills with, say, forty millions of her forty-four millions practically naked. We need not fear the competition of a few cotton mills at Osaka. Great Britain has 45,270,000 spindles; India has 3,649,736 spindles, and had not any when Japan began to build cotton mills. Japan now has only 984,557 spindles. We hear very little of India supplying the markets of the world with cotton; yet she can produce four yards to one of Japan. The proposition is absurd and not worthy of serious consideration."

In the face of such solidly worded opinions and predictions, the following report from Consul-General Miller, of Yokohama, will prove instructive and suggestive. He says that Japan has had an unprecedented success in her cotton mills; that they have increased rapidly, paid large dividends, and promise greater things in the future. His report follows:

UNPRECEDENTED PROSPERITY.

The prosperity of the cotton-spinning industry during the first six months of the current year is described as having been unprecedented. The demand for cotton yarn largely increased owing to the requirements of the army, but the activity of the export trade is also responsible in no small degree for the extraordinary prosperity of the industry. The profits of the spinning companies have been augmented all the more on account of the fact that despite the good prices realized for the yarn exported the cost of raw cotton has remained lower than usual. The highest dividend declared for the half year is by the Settsu Cotton Spinning Company at the rate of 36 per cent. The Miye, Kishiwada, Wakayama, Amagasaki, and Kurashiki companies have all shown dividends amounting to more than 30 per cent. All the other spinners have also declared dividends from 10 to 20 per cent. The average rate of dividend on the total paid-up capital of all the cotton-spinning companies in Japan during the first half of this year corresponds to 17 per cent, which, as compared with 6.6 per cent for the first half and 8.5 per cent for the second half of last year, is more than double.

EXTENT OF THE COTTON INDUSTRY.

At the end of June last the number of cotton-spinning companies throughout the country was 37, with an aggregate paid-up capital amounting to 32,907,000 yen. (The yen is valued at $0.498.) As to the total number of spindles, there were 1,304,786 rings and 83,060 mules. The total consumption of raw cotton during the period under

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review aggregated 25,191,200 kwamme, which, classified according to the places of production, were as follows (a kwamme being equal to 8¼ pounds):

	Kwamme.
Indian cotton	12,761,195
American cotton	7,675,679
Chinese cotton	4,071,584
Egyptian cotton	427,552
Annamese and Saigon cotton	53,266
Japanese cotton	1,824
Others	200,145
Total	25,191,245

The total quantity of yarn manufactured during the half year amounted to 452,362 bales (of 300 kin each, a kin being equal to 1⅓ pounds), or 135,708,600 kin in weight. Out of this, 314,955 bales, or 94,486,500 kin, were absorbed by domestic consumption, while 138,746 bales, or 41,623,800 kin, were exported. In other words, about 70 per cent of the total production was taken up for domestic use, while 30 per cent was available for export. From this it would seem that the quotations of cotton yarn are chiefly influenced by the requirements at home.

EXTENT OF EXPORTS.

The quantity and value of yarn exported, divided into its destinations, are—

	Kin.	Yen.
China	36,876,202	14,716,470
Hongkong	1,094,000	452,216
Korea	3,131,927	1,356,605
The Philippines	520,550	260,333
Others	1,195	239
Total	41,623,874	16,785,863

Altogether the spinning industry in Japan enjoyed extraordinary prosperity during the year ended June last, and there are indications that similar conditions are likely to continue for the remainder of the year, as it is reported, for instance, that the sale of the whole production of the Kanegafuchi Spinning Company for the year has already been contracted for.

BRITISH CONGRESS.

ACTION TO SUPPRESS SPECULATION IN THE RAW MATERIAL.

In June last a congress was held at Manchester, England, which was largely attended by British and European manufacturers of cotton goods and others interested in that trade, to which considerable space was devoted in former numbers of Consular and Trade Reports. Consul-General Bradley, of Manchester, forwards from the official

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report of the proceedings of the congress the resolutions adopted. Following is a synopsis:

1. That the baling and marking of American cotton is at present performed in a very unsatisfactory manner, thereby entailing serious losses on the users. The international committee is urged to take the question into immediate consideration, with a view to remedy the grievance complained of.

2. That the regulations of the Alexandria Produce Association for the buying of futures could advantageously be amended, and the association is invited to consider the following suggestions, namely, that it would greatly improve the general dealing in Egyptian cotton, and make it much more difficult for gamblers or speculators to corner the market, if (1) "fully fair" Egyptian cotton, (2) upper Egyptian with proper allowance, (3) pressed bales of both qualities were all tenderable in addition to the present accepted qualities.

3. That being strongly impressed by the reports on the subject of damp in cotton, and considering it an important source of grievance equal to the other complaints brought forward in respect to bad baling, marking, and other matters, urges strongly united action on the part of cotton associations and the representatives of cotton spinners' and manufacturers' associations so to alter or amend the rules and by-laws of such associations for the purpose of establishing a basis more equitable as between buyer and seller.

VALUE OF THE STATISTICS SOUGHT.

The Manchester Evening News, in an article on the investigation proposed, says:

The International Federation of Master Cotton Spinners' and Manufacturers' associations, in pursuit of their endeavor to nullify the results of the action of speculators in raw cotton, are endeavoring to obtain from the owners of the mills particulars as to the consumption of cotton over a given period and as to the stocks of cotton held on a certain date. In a circular issued October 4, and sent to every spinner in every country represented in the International Federation, it is pointed out that the securing of reliable statistics will be a first step toward placing the industry in a position to deal effectively with the action of speculators in the raw material, who can only carry on their operations successfully by reason of the unreliability of statistics at present obtainable.

The form which spinners are asked to fill up is intended to contain a statement of the number of spindles (mule and ring) in each mill; also the quantity of cotton (American, East Indian, Egyptian, and sundries) used from September 1, 1904, to August 31, 1905, in actual bales, and the cotton supply in stock on August 31, 1905, in actual bales. If short time was run during the year ended August 31, the statement should be given to what extent it was run. Messrs. David Smith, Garnett & Co., auditors to the International Federation, give their undertaking that the information given by particular firms will be kept secret, the intention being that only the totals shall be reported generally.

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GROWTH IN WEST INDIES.

SUCCESSFUL EXPERIMENTS—ACREAGE AND PROFITS.

Consul Clare, of Barbados, sends a report on cotton planting in the West Indies. In view of the many efforts being made in various parts of the world to secure a larger supply of cotton, the report can not fail to interest those engaged in the production or manipulation of cotton. He writes—

Mr. J. R. Bovell, agricultural superintendent at Barbados, has written an interesting article relative to the results of experiments in the cultivation of cotton in the West Indies. After dealing with the proper time for planting, etc., Mr. Bovell says:

With regard to the profit derived from an acre, which is, I know, given in the publications referred to above for the plantations in the sea islands, but as the conditions that prevail there are different from those which obtain in the West Indies, it may not be without interest if I give the results obtained in Barbados last season on certain typical estates. As I knew that certain of the cotton growers had kept accurate accounts of the cost of growing their cotton, and of the revenue obtained, I asked ten of these gentlemen to supply me with the information, and it is given in detail in Table 1 of this paper. Summarized, it is as follows:

Area under cotton cultivation	acres	95.25
Maximum quantity for one grower	do	34.00
Minimum quantity for one grower	do	.75
Average weight of lint obtained per acre	pounds	235
Maximum weight of lint obtained per acre	do	300
Minimum weight of lint obtained per acre	do	161
Average quantity of seed obtained per acre	do	553
Maximum quantity of seed obtained per acre	do	756
Minimum quantity of seed obtained per acre	do	388
Average total revenue per acre for lint and seed (the seed valued at 1¼ cents per pound, the price at which it is sold in Barbados for stock feed)		$70.59
Average amount realized for cotton per acre		63.53
Maximum amount realized for cotton per acre		84.00
Minimum amount realized for cotton per acre		45.61
Average cost of growing cotton, including manure on certain of the estates, but excluding cost of supervision, taxes, and interest on capital		20.59
Maximum cost of growing cotton, etc		28.39
Minimum cost of growing cotton, etc		10.45
Average profit per acre		50.00
Maximum profit per acre		77.30
Minimum profit per acre		35.89

COST OF THE PRODUCT.

From the above it will be seen that the cost of growing cotton in Barbados compares very favorably with that of the sea islands. The average returns there on fourteen representative estates in the counties of Beaufort, Berkeley, and Charleston, in South Carolina, for 1896 are given in the West Indian Bulletin, Vol. IV, page 314, from which it will be seen that the total cost of production per acre was $35.40 and the profit $23.47. In this case the average yield of lint per acre was 204 pounds and seed 14.3 bushels, equal, at 42 pounds to the bushel, to 600 pounds per acre.

Assuming that the cost of supervision, watchman's wages, taxes, and other expenses incidental to the production of cotton, the carriage, etc., to be $4.78 per acre, the amount which it actually cost one of the

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growers, who kept a careful account of the cost of producing his cotton, the average net profit per acre for 95¼ acres is $45.22.

As the average yield was 235 pounds per acre, the cost of growing the cotton, ginning, and shipping, etc., including supervision, etc., was 12.3 cents per pound; excluding supervision, etc., 10.3 cents per pound.

It is estimated that for the first six months of the year 25,646 hogsheads of sugar and 31,865 puncheons of molasses were exported. As mentioned under economic notes in this report, the planters were enabled to realize a profit on the entire production of these staples for the crop of 1904–5. These products will continue to be the principal staples for many years to come, although the cultivation of cotton will steadily increase. In this connection the rattooning of cotton will have to be discontinued, as it is rapidly assuming the form of a serious menace to the success of the industry.

IN MEXICO.

NATIVE PRODUCT INSUFFICIENT AND INFERIOR.

Replying to inquiries from the United States regarding the cultivation and manufacture of cotton fabrics in Mexico, Consul Griffith writes as follows from Matamoras:

Relative to the subject of the cultivation of cotton within this district and its manufacture into fabrics, Mexican cotton mills require to import about 40 per cent of the raw cotton needed. Of the 60 per cent of the Mexican-grown cotton used, it is asserted that 90 per cent comes from the Laguna district of central Coahuila, of which the manufacturing city of Torreon is the center. Not only is the Mexican cotton insufficient in quantity to meet the growing demand of the mills, but it is claimed the cotton grown in the interior is inferior in quality and in length of fiber to such a degree, in fact, that even were the supply adequate, an admixture of long-fiber American cotton would be necessary in order to secure sufficient strength in the fabrics. The soil and altitude along the lower reaches of the Rio Grande seem to be especially adapted to its growth and produces cotton which grades in staple with that raised in the Gaudalupe, Colorado, and Brazos valleys of Texas.

VALUE OF THE CROP.

The Mexican cotton crop for 1904, according to local dealers, will run between 90,000 and 100,000 bales, an increase over 1903 of about 25,000 bales. The favorable weather conditions of the last two months have added greatly to the crop prospects and many planters are getting ready for the harvest. The Laguna district has been the principal cotton-growing section. Recently, however, attempts have been made in various other localities. The yield supplies about one-third of the country's demand, the balance being imported from the United States.

UNUSUAL ADVANTAGES.

In view of these facts it appears that Matamoros, as well as the other cities and towns of this district, offers unusual advantages for the location of cotton mills, especially when consideration is taken of the plentifulness and cheapness of labor. The same deduction appears reasonable as to the advantages offered for the installation or sugar and rice mills under the recent altered condition of the customs tariff.

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SCIENTIFIC.

VANADIUM IN METALLURGY.

INCREASED TENSILE STRENGTH AND ELASTICITY LOOKED FOR.

Consul Halstead, of Birmingham, reports that at the meeting of the British Iron and Steel Institute at Sheffield Monsieur Guillet, of Paris, was scheduled to read papers, one on "Steel for motor-car construction in France" and the other on "The use of vanadium in metallurgy." He was prevented from attending by domestic bereavement and his paper was read by the secretary. The president, when expressing regret at the cause of Monsieur Guillet's absence, and confessing that France was still ahead in motor-car manufacture, thought that the British student institute as metallurgists were to some extent to blame for it, because they had not given the makers a quality of steel that had high properties for resisting shock.

In M. Guillet's paper, "Steel used for motor-car construction in France," he wrote in part:

"No one could question the fact that the industry which, during the last few years, had had most influence on the metallurgy of the special steels was that of motor-car construction.

"The special steels actually in use in France for the construction of motor cars could be classified as: (1) Steels with low percentages of carbon and nickel (pearlitic steels), used for parts requiring cementing and quenching, such as shafts and gears which engage directly; (2) steels with medium percentages of carbon and low percentages of nickel, used after quenching and reheating, for a large number of parts, such as shafts, gearing, and pinions; (3) steels low in carbon and with high percentages of nickel, used for valves; (4) chromium steels, with high carbon and low chromium percentages, used for bearings; (5) silicon steels; (6) nickel-chromium steels, and (7) a new steel known as NY, the composition of which has not been published."

INCREASED TENSILE STRENGTH.

Steel makers interested in M. Guillet's papers on vanadium can easily get copies of the printed reports of the institute. He held that vanadium improves the mechanical properties of metallurgical products; that on normal steels it produces a distinct increase in tensile strength and elastic limit, and has no influence, or an insignificant one only, on the elongation and contraction and the resistance to shock, acting almost with as great effect as carbon, yet not increasing the brittleness. This indicates that the influence of vanadium in metallurgy is of considerable importance, and he considered it the element which, together with carbon, acts with the greatest intensity in the way of improving alloys of iron, and said that with a greater demand there would be a decrease in its price. In the discussion

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which followed one speaker thought M. Guillet spent too much time on alloys with a high percentage of vanadium, "as the best results were produced with 1 per cent or less," and another speaker thought the author could not be aware "how far advanced already was the use of vanadium steel in motor construction in this country."

STEEL IN MOTOR CARS.

A gentleman with practical motor car building experience, and in several countries a great experience in the manufacture of steel articles, who called on me said there was no great need for increase of resistance to shock in steel used for the larger type of motor cars. The present steel was serving very well. It is, however, very important for the smaller cars with lighter parts. He said he was able to obtain very satisfactory British steel, that he did not think the French were able to get better steel than he was using, and that a German motor firm, owing to important connections with the steel trade, had been able earlier than the rest of motor manufacturers to get the assistance of the best German steel makers in the selection of the right steel for each part and its kind of work in motor cars. This expert assistance of steel makers had been very valuable in bringing this car to the front; but now that the motor-car industry was one in which the development of sales would profit any steel company, the same German steel companies and other steel companies, including British, having awakened to the possibilities of the market are offering the kinds of steel to motor-car builders they need, and making clear regarding each kind its best use.

BREAD-MAKING MACHINE.

WHEAT TURNED INTO BREAD IN A CONTINUOUS PROCESS.

Consul E. Theophilus Liefeld, of Freiburg, Baden, reports that a London baker has invented a bread-making machine which converts wheat into bread without the aid of a hand, thereby effecting a saving which permits of the reduction of the price of a 10-cent loaf to 6 cents. The London Daily Mail, from which the facts are taken, reports that a large milling bakery, with a capacity of 300,000 pounds of bread per day, is now under construction. If the invention continues to duplicate its alleged success on this large scale, it will undoubtedly effect a great revolution in the bread-making industry. Consul Liefeld also calls attention to a new churn which, it is said, produces butter in sixty seconds. He reports:

According to the London Daily Mail of October 5, 1905, bread at 6 cents per loaf, instead of about 10 cents, it is claimed will be the probable result of an invention in the form of a bread-making machine now on trial in London. London alone consumes 6,000,000 pounds of bread a day, so that the invention may effect a daily saving of $60,831.25, or over $21,899,250 per annum, to the people of London alone. Simply stated, the invention is a series of ingenious machines which convert wheat into loaves ready for delivery without human aid, and at a rate that puts other means of production out of the field.

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SAVING IN LABOR AND MACHINERY.

It is not only a labor and time saving invention—it might also be called a machine-saving machine, so greatly does it simplify the process of bread making. For instance, at present the miller grinds his wheat perhaps as many as fifteen times to obtain the best flour. By the new method the wheat is ground only once. This grinding gives three products—flour, middlings, and bran. The foremost is conducted to the bin, the bran is mechanically carried and automatically weighed into sacks, while the middlings pass into tepid water, by which all the floury part is washed out. This water, impregnated with nutritive material, flows into the kneading pan, in which the dough is automatically produced. The dough is left to rise for one hour and a half or two hours, is then shaped into loaves, and forty minutes later an electric carrier delivers the hot bread to the throbbing motor cars that wait impatiently to carry it through London.

CONSTRUCTION OF LARGE MILLING BAKERY.

The bakery where these wonders are worked is in Upper Thames street, London, E. C., and is owned by Mr. Apostoloff. Two years ago his takings amounted to 83 cents per week. To-day his new methods enable him to turn out 11,000 half-quartern loaves, and 8,000 fancy Vienna bread and rolls from his factory every day. And this is only the beginning. He is now building what will be the largest bread factory in London. It is to have 400 ovens, and it is calculated that it will be capable of producing 300,000 pounds of bread a day. An additional economical result claimed for the process is that perfectly sweet white bread is produced from English wheat alone. It is a well-known fact that bakers will not venture to make bread from English wheat flour unless mixed with the best foreign flour. This change of method alone secures a saving for the Apostoloff system of from 97 cents to $1.46 on each sack of flour. To this increase in milling products—constituting the main source of commercial profit—must be added the profit at present made by the middleman, as well as the cost of transport, with its consequent waste in handling, and both profits are secured by the milling bakery.

A NEW CHURN.

Another novelty in machines dealing with food—and this latter is to be seen at the dairy show at the Agricultural Hall in London—is a churn which makes butter in sixty seconds. The machine is so handy that it might very well be placed on the tea table as an accessory to the cups and teapot, and yet not look out of place. Given the requisite amount of cream, with a temperature of 60°, butter can be made at any time when desired. The "Empire" churn does not even need a special vessel for holding the cream. The cream is placed in the vessel so that the "dasher" is in the center, and about 1½ inches below the surface. The handle is then turned slowly for a few seconds, and then at a good speed, and within one minute butter is formed. If some fresh cold water be poured in and the handle turned slowly two or three times, the butter is ready for washing and making up. The "Eureka" is a second machine of this kind, and it also makes butter from cream in sixty seconds.

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SELF-COOKER.

EXHIBITION OF COOKING BOXES.

Consular Clerk George H. Murphy, at St. Catherines, Ontario, sends a report on a cooking-box exhibition at Baden, Germany, which is of interest in view of former reports on the subject. He writes:

In its issue of September 22 the Frankfurter Zeitung reports that, in connection with the twenty-fifth annual meeting of the German Union for Assisting the Poor, the Women's Union of Baden provided for an exhibition of cooking boxes. In recent years much attention has been given by manufacturers to this new and useful article of kitchen furniture. Instead of being made entirely of wood, cork and hard paper are now also being used. Moreover, felt and feathers are taking the place of "wood wool" for upholstering the boxes, and the covers of the enameled pots are made more air-tight than formerly. Numerous manufacturers have produced more or less remarkable "self-cookers," and inventors are still at work.

On the occasion mentioned above a Karlsruhe lady exhibited an unusually large box, equaling a range in its completeness and containing pots of every imaginable size and variety. Furthermore, the Baden Women's Union (Frauen-Verein) has published a cookbook explaining fully the use of the box and giving a large number of tempting recipes. Of course the food is thoroughly heated by means of fire before the pots are transferred to the cooking box, where they continue to simmer for hours. The process is particularly good for those kinds of food which require slow development, such as soups, boiled meats, legumes, vegetables of the cabbage family, rice, and some sorts of puddings.

VALUE OF THE COOKING BOX.

The value of the cooking box to the poor is self-evident, and a skillful workman can very easily adapt for the purpose any good box, lining it with "wood wool," or any good nonconductor of heat, and carefully fitting in ordinary pots.

In Norway the cooking box is already very extensively used, but in Germany it has been found much more difficult to interest working women in this new friend. For many years the Grand Duchess of Baden has been doing her utmost to induce people of all classes to experiment with a very simple sort of cooking box, and on her journeys she usually takes one with her for the purpose of practically demonstrating its usefulness by distributing warm food. In spite, however, of this propaganda, which is being made throughout the country by philanthropists, the result can not yet be said to be very encouraging, for whatever is new and simple is sure to be opposed by prejudice. Most women, especially those who are uneducated, do not comprehend the natural law of bad heat conductors, regarding it as unnatural and incredible that the same feathers and thick woolen materials which imprison the heat of our bodies in winter and thus keep us warm are likewise capable of preventing the escape of heat stored up in food by previous exposure to fire. No one is more conservative than a cook.

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Accordingly, in order to obviate prejudice by familiarizing the rising generation with the advantages to be gained in this way, many German women's clubs are now providing cooking boxes for use in their housekeeping schools.

NEW INDUSTRIAL PRODUCT.

ORNAMENTAL AND USEFUL ARTICLES FROM COW'S MILK.

Referring to a former report made by him on a product known as "galalith," Consul-General Guenther writes as follows:

Under date of March 7, 1904, I reported to the Department of State with reference to a new industrial product prepared from skimmed milk called "galalith." I consequently received numerous letters from parties in the United States asking for further information. A few days ago I came across an advertisement of galalith, which may prove interesting to farmers and manufacturers in the United States and from which I take the following:

Galalith.—A new horn-like product from cow's milk. From the milk of certain species of plants very valuable products have for a long time been made for the manufacture of plastic goods, as, for instance, hard rubber, known to everybody. That animal milk, especially cow's milk, also contains a similar exceedingly valuable ingredient is shown by the new horn-like substance galalith. Incredible as it may sound, galalith is in fact made entirely from cow's skimmed milk, without addition of foreign substances, only by employing a certain process of hardening. The process of manufacture is protected by patents in all civilized countries.

Galalith is produced in all colors, various marmorean designs, and imitations; the imitations of turtle-shell, amber, corals, etc., are as similar to the natural product as one egg is to another, so that galalith turtle-shell, for instance, is hardly to be distinguished, even chemically, from genuine turtle-shell. The colors are the finest and most brilliant. Compared with celluloid, galalith possesses the essential advantage that it is absolutely odorless and not at all inflammable. In consequence of its properties, galalith is to be classed with the most precious natural products, but can be procured at much lower cost. It is already used for the manufacture of combs, clasps, hairpins, cigar and cigarette holders, bowls for pocketknives and razors, handles for umbrellas and canes, backs of brushes, snuffboxes, rings, inlaid ornaments for fine furniture, balls and pearls, buttons, penholders, pencils, paper knives, seals, crochet needles, chess figures, dominoes, dice, etc.

NEW EXPLOSIVE.

SUCCESSFUL TESTS IN MINES.

Commercial Agent Wardman, of Aguascalientes, reports the invention of a new explosive. He writes:

Mr. H. C. Morre, an employee of the Mexican Central Railway in this city, has recently applied for a Mexican patent to cover a new

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explosive. The claim is made that this explosive has about the same breaking strength as ordinary 40 per cent dynamite, that used in mining. In addition to this it will do away with the usual bad effects of smoke, and it offers the advantage of being best exploded by a fuse or an electric spark, thus making the use of caps unnecessary. It is said that the cost of manufacturing will be very small, owing to the cheapness of the ingredients and to the simplicity of the plant that will be required.

Experiments have been made with it at the mines of the Aguascalientes Metal Company, in Asientos, this State, and from the report made by the company it would seem that the discovery gives promise of being worked into considerable importance. Successful tests have also been made with firearms.

If the patent is allowed, a more complete series of experiments will be made with the explosive, and if successful, the parties holding an option on the patent will endeavor to establish it commercially.

TO PRESERVE WOOD.

SUGAR AND HEAT PRINCIPAL ELEMENTS.

In the Daily Consular Reports for March 20, 1905 (No. 2210), there appeared a report from Consul Atwell, of Roubaix, France, on a process for treating fresh wood which is claimed to have the effect of preserving and giving it the appearance of age. The process is patented. Sugar and heat are the principal elements used. Referring to his former report, Consul Atwell notes:

Since my report on wood seasoned by sugar, specimens of wood treated by the Powell process have been exported to different tropical countries for trial, and word now comes from the Madras Presidency that specimens sent there have resisted successfully the attack of white ants. This will doubtless bring about a revolution in the export timber trade to tropical countries, as soft wood treated by the new process will replace the expensive teak and eucalyptus that are known to resist the ravages of white ants.

AKONIA.

PREVENTION OF DUST.

Consul Horton furnishes the following:

There has recently arrived in the harbor of Piraeus from London 20 tons of akonia, a substance which, dissolved in the water with which streets are sprinkled is said to prevent dust from rising. I have not been able to find anybody here who could tell me the chemical constituents of this substance. At the mayor's office I received the following information: One ton of akonia, dissolved in 800 gallons of

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water will sprinkle one-third mile to a width of 7.25 meters. After fifteen days the street should be sprinkled again with one-fourth ton of akonia dissolved in 400 gallons water—that is, in case there has not been a rain since the first sprinkling. The akonia forms a coating over the street and it is said to be most effective and quicker dissolved in salt water.

ASPHALTINE.

CONSTRUCTION OF PAVEMENTS.

Consul-General Guenther, of Frankfort, Germany, reports that a substance called asphaltine and composed of a mixture of tar and iron slag is being successfully used on the streets of London and Stuttgart. He writes:

It is claimed that a new substance called asphaltine, and invented by Professor Buettner, of Munich, is superior to any now in use in the construction of pavements. The journal Bitumen describes it as being so elastic, tough, and durable as to resist almost completely both grinding and crushing. Experiments, made principally in England and Germany, have been successful. Asphaltine is a mixture of tar and iron slag. Although the best tar is used the cost is comparatively low. Bad weather during the construction of asphaltine streets is said to have no effect on their durability.

Some forty streets have thus far been paved with this new material in London. In spite of the very heavy traffic on these streets they do not show the least wear. The paving also looks well, presenting the appearance of mosaic marble.

PHONE MOUTHPIECE.

DEVICE FOR A SUBSTITUTE.

Consul Mahin, of Nottingham, reports that the suggested transmission of disease by telephone mouthpieces has led the British General Electric Company to devise an instrument in which all danger is avoided by simply abolishing the mouthpiece. The receiving and transmitting apparatus is combined in a small metal case, shaped like a watch, which is held continuously to the ear both in speaking and in listening, the transmitting microphone being made so sensitive that it becomes unnecessary to concentrate the sound waves on it by the aid of any mouth, piece such as is ordinarily used. Mounted on a handle, with a speaking key, the new arrangement is exactly similar to the common combined receiver and transmitter, except that there is no mouthpiece and the speaker, as it were, addresses himself to the world at large, instead of talking into a trumpet-shaped orifice.

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MEDICAL AND PHARMACEUTICAL.

MEDICAL.

REPORTED CURE FOR TUBERCULOSIS.

NATURE AND EFFECT OF THE NEW REMEDY—RESULTS OF EXPERIMENTS.

Consul-General Guenther, of Frankfort, Germany, has forwarded a report on a new cure for tuberculosis. It is by Doctor Behring, and is supposed to be efficient. The consul-general writes:

The new remedy of Professor Behring, of Marburg, Germany, which he reported to the International Congress for Tuberculosis, recently held at Paris, has attracted wide attention and has given rise to many incorrect statements. On October 7, at the final session of the Congress, Professor Behring read his report on his remedy for tuberculosis. According to a telegram of the Frankfurter Zeitung he reminded his hearers of his statements made heretofore in the journal Tuberculosis, and in the first volume of his work on modern problems concerning the cause and cure of consumption, and described the nature and effect of the new method which, he believes, is destined to protect persons threatened by consumption against the harmful consequences of tuberculous infection.

WORK WITH TEST TUBE.

Professor Behring then described his work with the test tube in producing a remedy called by him "T. C.," which changes the active immunization into a passive one. "I give you," said the speaker, "the assurance that I never experienced a greater joy in my life than during the days, weeks, and months when the causative chain between vaccination and immunity appeared before my eyes with ever-growing clearness. Thanks to the constantly repeated observations and experiments with animals, one mystery after another cleared itself with reference to the nature and effect of the serum. In order to free T. C. of all substances which impede its remedial effects, three groups of bacillar substances must be discarded:

"1. The substance, soluble in pure water, which possesses the properties of the volutine described by Arthur Meyer, of Saarburg.

"2. A substance only soluble in a solution of common salt, which resembles the tuberculine of Koch.

"3. Several substances which possess no toxia properties.

"A substance then remains which I call the 'Restbacillus.' It still possesses the form and the coloring property of the tuberculosis bacillus. It can be transformed into an amorphous substance, which is immediately absorbed by the lymphatic cells of the guinea pig, sheep, goat, cattle, and horses.

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"Under the influence of the T. C. this amorphous substance changes the cells temporarily and develops the immunity state of the organism. It is of fundamental importance in this connection that the T. C. possesses the property to produce a tubercle. This tubercle however does not become 'cheesy' (verkaest) and never decays (zerfaellt). It answers exactly to the tuberculosis granulation of Laennec."

After these statements Professor Behring said in conclusion: "After experiments with various mammals I am convinced that the T. C. is already formed in the original bacillus, and that it can be produced as a remedy for the human body. I postpone the publication of the second volume of my book until the effect and the harmlessness of the remedy has been demonstrated. It is necessary that scientists and clinical experts examine it. So far, the various remedies for tuberculosis have not effected those results which could have been expected from experiments with animals. I hope to be more fortunate, and shall place my remedy in the hands of scientists in the hope that they will meet with the same and even better success than has attended my efforts." He then reminded the audience that his remedy for diphtheria also had to struggle for recognition for years, and its effect was improved only through practical experience.

OPEN-AIR TREATMENT.

SUCCESSFUL RESULTS IN TREATMENT OF CONSUMPTION AND SMALLPOX.

Consul Mahin, of Nottingham, England, reports successful efforts to cure consumption and smallpox by the open-air treatment. He writes:

The open-air treatment for consumption has been initiated in this consular district with successful results. Three years ago a sanatorium was established in this county on elevated ground, with southern aspect, at the edge of a forest. It is primarily for persons of limited means or none at all, and is therefore supported mainly by contributions from philanthropic people. The cases of consumption in this district are chiefly among the poor, and these can only be reached through charitable institutions. The annual number of deaths in this city from consumption is nearly 500, being about 10 per cent of the total number from all causes. The ratio in the entire county is about the same, the annual number of deaths approaching 1,000. An interesting fact is that the percentage of mortality among males is much greater than that among females, even where the two sexes are employed in the same trade, as in lace or hosiery manufacture.

About 200 patients have passed through the Nottingham sanatorium since it was founded. Of these, the disease was arrested in about 25 per cent, great improvement was reported in about 30 per cent, some improvement in 25 per cent, "stationary" was reported for 10 per cent, while the remainder grew worse. No deaths are so far reported. Altogether, this record is considered good, in view of the fact that most of the patients are in advanced stages of the disease. It is found very difficult to induce persons to take treatment at the first signs of tuberculosis. An "after-care committee" endeavors to follow up leaving patients to discover if relapses occur. An organization is also

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effected to secure suitable employment for discharged patients. It is proposed, besides, to provide some light outdoor work, such as horticulture, for patients at the sanatorium.

THE SANATORIUM.

The sanatorium is a long one-story frame building with a central part of two stories. A roofed veranda facing southward extends the full length of the one-story wings. Extensions can be made indefinitely as means are obtained. In Derbyshire the health officials have provided small huts with one side open for consumptive patients. These can be turned around with changes of the wind, to prevent its blowing directly on the patients in the beds. Besides sanatoria, various drugs have been tested in this country for the cure of tuberculosis. Encouraging results are reported from the use of a cyllin inhalant, the composition of which is not definitely announced, but is understood to be "certain members of a new series of oxidized hydrocarbons."

The total annual number of deaths from tuberculosis in this country is placed at not less than 40,000, and the total number of sufferers from consumption at a given time is estimated at 200,000. Statistics, however, indicate a decrease of 50 per cent in the mortality in comparison with a few years ago in proportion to population. This improvement is attributed to advanced methods of treatment, to measures for preventing infection, and to education in wholesome ways of living and working.

OPEN-AIR TREATMENT FOR SMALLPOX.

The open-air treatment has also been successfully applied to smallpox cases. The health officer of Nottingham recently reported as follows: "The uniform practice of nursing all serious cases singly in bell tents with open sides, i. e., practically in the open air, has been adopted with the best results. All cases so treated made a rapid recovery with a minimum of septic complications. In addition to the advantage to the individuals themselves there is the palpable advantage to other patients in hospital with them of being out of reach of the poisonous emanations from their bodies during the acute stage of their attacks. The progress of the cases so treated has been so much more satisfactory than that of those nursed in the wards that patients lately admitted to hospital have often asked, on the strength of what they had heard outside, to be nursed in the open air rather than in the hospital wards."

CURE FOR CANCER.

SUCCESSFUL EXPERIMENTS WITH SUN RAYS.

Consul-General Guenther, of Frankfort, Germany, reports a cure for cancer. According to German experiments made with sun rays upon cancer a considerable number of well-established and well-authenticated cures have been recorded. He writes:

Doctor Hirschberg, one of the most prominent surgeons of Frankfort, in the Clinical Weekly of Berlin, reports a very interesting case

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of the curative powers of sun rays in cancer of the skin, which is all the more interesting, as the patient is Doctor Hirschberg himself. Last winter that physician suffered from skin cancer of the exterior part of the ear, for which he was going to submit to an operation. Before doing so he made a short trip to Caux les Territet, on Lake Geneva. The weather being very fine, he took daily walks in the sun, lasting several hours, whereby the afflicted ear was exposed to the southern sun. After eight days the doctor noticed, to his surprise, that the margin of the cancer scaled off slowly and left a smooth surface. He at once attributed it to the effects of the sun rays and used them now systematically. For several hours daily he exposed his ear to the rays of the sun, and after a few weeks the whole swelling had scaled off and had left a smooth surface.

EXPLANATION OF EFFECTS.

Doctor Hirschberg explains the effects of this treatment in this way: The normal skin is browned by the sun, as the epithelial cells under its influence absorb coloring matter from the blood. This "browning" serves as a protection against the burning effects of the sun. The cancer cells, which do not possess the quality of absorbing hard blood substance, die off, as the sun destroys them. The winter in the highlands, according to Doctor Hirschberg, is a very important curative factor. The intensity of the sun rays increases with the altitude, the percentage of vapor decreases, and the air in such altitudes (Caux lies about 3,600 feet above sea level) is free from germs, and exposure there to the sun in winter may be made for many hours. Such exposure could not occur in summer on account of sunburns. Sun baths in the high mountains are therefore of great curative power, and it is to be hoped that in the future more attention will be paid to them. That the rays of the sun can be of direct curative benefit was shown through experiments at Alland, where in some cases it was possible to give relief in tuberculosis of the larynx, and even curing it, by direct application of the sun rays.

TO CURE A COLD.

Consul-General Guenther, of Frankfort, Germany, reports a new cure for a cold. It consists of a mixture of cocaine, paranephrine, and water, applied on cotton to the nose. It arrests secretions, and cures the cold, usually, by several applications. Inasmuch as colds can lead to dangerous diseases, it is wise to prevent their protraction. In the case of children, Doctor Vohsen advises mothers to cut a small rubber tube obliquely and to insert the sharpened end into the nose, then, by means of a rubber ball, blow air into the tube. Thus the secretions in one side may be blown out through the other side. This eases the children and allows them to breathe freely. One can see at a glance how valuable such knowledge is. It can be used in all kinds of cases affecting the nose and throat.

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PHARMACEUTICAL.

GREEK LAW REGULATING PRACTICE AND PRICES.

Consul Horton, of Athens, in response to numerous requests, furnishes an abstract of the laws governing the practice of pharmacy in Greece, the important provisions of which are as follows:

For opening a prescription drug store, or pharmacy, in Greece a permit is required from the board of health in Athens, which permit must be approved by the minister of the interior. For opening such pharmacy there must be a population of not less than 1,000 inhabitants. In towns of from 3,000 to 6,000 inhabitants two pharmacies are allowed; from 6,000 to 30,000 one pharmacy is allowed to each 1,000 inhabitants. Above 30,000 inhabitants, one additional pharmacy is allowed to each additional 6,000. In this population are reckoned villages and suburbs one hour's distance from the principal town.

In places where there is no doctor of good standing permits will not be issued for the establishment of pharmacies.

Where only one drug store exists it must be located in the center of the town. Holders of permits must put them in force within six months after their issuance, otherwise permits will be withdrawn.

A druggist retiring from business can not again open a pharmacy in the same municipality.

The same proprietor is not allowed to conduct two drug stores.

Persons who deal in drugs, but who do not write prescriptions, must pass a "limited" examination showing a general knowledge of the nature and effects of various drugs.

PATENT MEDICINES AND TRADE-MARKS.

By a treaty between the Greek and United States Governments (1894), the Hellenic Government gave citizens of the United States the same rights as its own subjects in all that relates to the registration and protection of trade-marks.

When the applicant resides in a foreign country he must name or appoint an attorney in Athens and prove registry in his own country. Proof of registration in the United States must be authenticated by a certificate from a Greek consul in that country. The attorney must not only take the necessary steps to secure the registration of the trade-mark, but shall also continue to be the legal representative of the applicant before the tribunals of the Kingdom should there be any infringement of his trade-mark in Greece.

Application for registry of trade-mark must be made by the local attorney of the applicant, and must include a description of the mark, three copies of the mark upon detached paper 8 by 10 centimeters, a metal typographical block of the same dimensions, the products to which it is applied, whether used in relief or intaglio, and a receipt for the fee. The fees and expenses are: For registration fee (gold), 60 drachmas; for stamps and copies, 12 drachmas; for attorney, 30 drachmas.

Specialties imported in bottles pay a duty on liquids of 2.70 drachmas per oke, 40 per cent off for tare; solids in bottles, 5.40 drachmas per

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oke, 50 per cent off for tare. Goods in paper boxes (pills, tablets, etc.) pay 6.75 drachmas per oke; no tare allowed.

An oke is 2.82 pounds avoirdupois, and the custom-house here reckons the drachma at 1.35 to the gold franc.

AMERICAN SURGICAL DRESSINGS PREFERRED.

The Standard of London quotes from the Pharmaceutical Journal as to the trade of Hongkong and the classes of goods to which preference is given the American, British, German, and French manufacturer. In surgical dressings the American manufacturer is said to outclass all competitors. The quotation follows:

"The actual trade of this colony amounts to over £20,000,000 per annum, Hongkong being the center of a large trade in various kinds of produce. The British manufacturers control the business in drugs and chemicals, buyers placing most confidence in them, although their prices are above those of foreign competitors. As regards medicines, most of the new remedies are of German and American origin. Surgical instruments of British manufacture are considered the best, and are almost invariably preferred by local surgeons, who, as a rule, buy direct from home. On account of their high price they are undesirable stock for the retailer to hold; cheaper instruments of foreign origin suit the Chinese doctors. As regards such articles as brushes, rubber goods, and earthenware, English manufacturers again take the lead, but in glassware the English are entirely outclassed by the Germans and French.

HIGH QUALITY OF AMERICAN GOODS.

"In surgical dressings the American manufacturers outclass all competitors. Their success (says our informant) is due to the high quality of their goods, the close observance of scientific principles embodied in their ingenious and elegant packages, their energy in sending out traveling representatives, and their keeping in touch with their buyers by the regular posting of pamphlets and occasionally personal letters. The plainer and more useful toilet articles are of British origin, but the fancy and more expensive lines come from France. The class of medicines for which there is the best sale includes medicines for venereal diseases, tonics, aleratives, salines, antipyretics, and antiseptics. Proprietary medicines are in moderate demand. The French captured the market for fancy soaps and toilet articles many years ago; their products are most elegant. The Germans are also beginning to make headway. There is a fair demand for surgical instruments, spectacles, photographic cameras, plates, paper, etc. British traders who wish to further their trade with this colony should send out representatives, including Hongkong in their tour, or send a set of samples to likely buyers or appoint local agents to get up elegantly printed and illustrated price lists, which should contain all information necessary for the buyer to judge of what he is buying, and avoid omitting such an important detail as the dimensions of the goods for sale. It is also advisable to find out the names of buyers, and circularize them regularly. In the case of proprietary articles, a copy of the Hongkong directory should be obtained, and circulars posted to all the leading residents."

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NEW REGULATIONS FOR PRACTICE IN ARGENTINA.

Minister Beaupré advises the Department of State that the Argentine Government on September 14 adopted a law regulating the practice of pharmacy within that country. The text of the law follows:

ART. 1. After the promulgation of this law only those pharmacists may establish new pharmacies who possess a diploma authorized or revalidated by the National University, and they shall have the effective and personal direction of the same.

ART. 2. For the purposes of the preceding article there shall be considered as the establishment of a new pharmacy every modification in the firm or partnership, as well as the reopening of any pharmacy that may have remained closed more than thirty days.

ART. 3. The maximum period of four years shall be accorded for the actually existing pharmacies to place themselves within the provisions of the first article.

ART. 4. The qualified pharmacists that may be proprietors of pharmacies before the fifteenth of July of one thousand nine hundred and five, that have passed in the capacity of qualified pharmacists for three consecutive years immediately previous to that date, are qualified to matriculate in the courses in pharmacy of the national universities.

ART. 5. In the case of the death of a pharmacist only his widow or his minor sons shall be allowed to keep open the pharmacy until the termination of the four years, the pharmacy to be directed during this period by a pharmacist.

ART. 6. The pharmacist shall in every case be personally responsible for the purity and legitimacy of the products that he dispenses or that he employs in making his preparations, of whatever origin they may be.

ART. 7. Those who infringe this law and the regulation of the same that may be decreed shall be subject to a fine of one hundred to a thousand pesos, the closing of their establishment, and the suspension from and disqualification for the practice of their profession according to the gravity and circumstances of the case.

ART. 8. The penalties shall be imposed by the national department of hygiene, it being permitted to appeal from its decision within five days to the respective criminal or titular judge.

The sentence shall be executed by the corresponding tribunals.

ART. 9. The executive, with the intervention of the national department of hygiene, shall regulate this law, establishing everything that refers to the conducting of pharmacies, to the preparation and dispensing of drugs, serums, vaccines, and other curative, preventive, or diagnostis agents, decreeing all the measures tending to safeguard the morale of the profession and the public health.

ART. 10. Let it be communicated to the executive.

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MISCELLANEOUS.

AMERICAN PRODUCTS IMITATED.

OUR MANUFACTURERS' METHODS—PRODUCTS COUNTERFEITED ABROAD—INVASION BY THE AMERICAN SHOE.

Mr. William E. Curtis, the well-known correspondent of the Chicago Record-Herald, who has traveled extensively in foreign countries, in a recent letter published in that journal comments on methods of American manufacturers in connection with the sale of their products abroad, and also on the reprehensible practice of foreigners in imitating American products and placing on the counterfeit article an "American-make" label. Many complaints made abroad against American manufacturers are attributable to the dishonest practice of foreign imitators.

Our consuls have repeatedly directed attention to this growing imposition, and in almost every issue of Daily Consular and Trade Reports specific instances of this dishonesty may be found. What Mr. Curtis said on these points follows:

American and native merchants in Europe often complain that manufacturers in this country injure and sometimes destroy their foreign trade by trying to work off articles of inferior quality, by imperfect packing, and by neglect to supply exactly what is called for. Mr. Frank J. Poole, a special agent of the Bureau of Corporations, who has had wide experience in introducing American goods into foreign markets, says that this fault is becoming more noticeable and does great injury to our export trade in manufactured merchandise. For example, there is a great demand in England for American printing ink, and we might have that market if our manufacturers would be careful in sending exactly what is called for.

The printing establishments in England prefer ink of a peculiar quality and color, and it is just as easy to furnish that as to furnish any other; but manufacturers over here continue to send inks that the English printers do not want, and then insist that their agents shall compel or persuade those printers to buy them.

Mr. Poole also mentions the furniture trade as illustrating the carelessness of American manufacturers. The British public, he says, want a heavy, solid, well-made, and substantial quality of furniture, and is willing to pay good prices for it; but our manufacturers insist upon shipping light, poorly made goods, which are not wanted and can not be sold, and are thus destroying their own trade.

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COUNTERFEIT SHOES IN ENGLAND.

American boots and shoes have been the rage in London and other cities of Europe, particularly Germany. Mr. Poole says that Regent street in London has been lined with so-called American shoe stores, and a great reputation has been built up for American footwear because of its superior quality and fine workmanship. Now, he says, the market is likely to be lost or seriously impaired by shipping large invoices of inferior shoes and trying to force them on the British trade. Manufacturers of low-grade goods have taken advantage of the reputation of American boots and shoes to unload stocks of poor material and badly made goods upon a confiding public. Mr. Poole says, however, that American manufacturers are not altogether to blame. English manufacturers have taken advantage of the craze for American goods and have flooded the market with cheap imitations, made with American machinery and marked with American labels. The same is true in Germany.

AUSTRIAN AND GERMAN IMITATORS.

Some years ago several New Jersey manufacturers established a chain of shoe stores all over Germany and made American goods popular in all of the large cities. They did the same in Austria, and the local dealers and manufacturers in both countries became so concerned about the American invasion that they appealed to their governments for protection and demanded that American shoes should be shut out of the markets. Boards of trade and other semiofficial organizations ordered boycotts, municipal authorities in several places endeavored to stop the American invasion by imposing taxes and other restrictions, but all these attempts were failures, and the German and Austrian boot and shoe makers, in self-defense, were compelled to copy the American goods and fill their shelves with cheap imitations, which they offered at lower prices. For a time this worked well, but the public soon dis covered the difference between the bogus stuff and the real goods. They found that their own dealers were deceiving them, and that gave the Americans more trade and bigger profits than ever.

PROMOTING FOREIGN TRADE.

JEALOUSY OF THE PROGRESS MADE BY THE UNITED STATES.

Consul McNally, of Liege, Belgium, offers the following suggestions as to the best methods for building up American trade:

The recent statistical publication of the United States exports for the past year has caused no small degree of conjecture as to the possibilities in that direction, when the time comes, for more energetic action on the part of our manufacturers by reason of a contracted home market and the necessity of entering new fields with their surplus goods. The time must come when the commercial and industrial fields of exploitation at home shall be exhausted and the exigencies of trade will engender a competitive spirit that will carry the American product of farm or workshop into the remotest parts of the business

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world. The immense export of American goods under conditions that have not half tried the ingenuity of United States sales agents to place them abroad, induces a conjecture as to what the consequences will be when they enter the lists whole hearted and with the spirit that characterizes the American producer. While the attention of the home market engages the producer at present, the limitations of which must gradually become lesser as time goes on, the inevitable battle of trade supremacy must one day confront the United States, and there is no better time for preparation than the present affords.

STRUGGLE OF THE NATIONS.

The struggle now being waged between the larger European producing nations for a market for their productions is an indication of what may be expected when western civilization and genius shall join the fray armed and equipped with modern creations of recognized merit. That just such a condition is anticipated can not be denied. The efforts of noted economists and commercial and industrial experts have been in the direction of forestalling this expected onslaught, and they are still busy in devising ways and means to protect themselves when the time arrives. One occasionally reads of the suggestions of some recognized authority for the coalition of the commercial nations against the inroads made upon their lucrative fields by the manufacturers of the United States; and while none have as yet come forward with a practical means of carrying their views into practice, the sentiments are echoed from all parts of Europe. That such a commercial combination has been suggested by various authorities can not be denied, and that the idea has received an impetus by the recent published figures of America's exports is clear.

The cry of distress goes up from the exporter to the United States against the barrier of a protective tariff, which, it is claimed, was enacted to keep foreigners out of the American field of industry and commerce. The spirit of retaliation is ripe, and only awaits the formation of a system that will preserve for its originators the fields they now enjoy.

The feeling against our trade expansion in foreign markets is more than mere jealousy. In some instances it is developing into trade enmity.

WORK OF CHAMBERS OF COMMERCE.

To those having the capacity to blaze the way for future commercial invasions none are more powerful and up to date, except in one point, indifference to consular officers, than are the boards of trade, chambers of commerce, and kindred organizations. My experience shows that it is a rare instance where one of these powerful commercial bodies ever cooperates with the consular officers in an effort to stimulate or build up a foreign trade for the benefit of the home producers. It may be that the time has not yet arrived for their participation in markets foreign to their own, but when the time does come the efforts expended by these business organizations will be amply repaid by the results of their cooperation with the consuls abroad. European commercial and industrial fields are always vulnerable to American goods. The present obstacle to be overcome is to induce the retail dealer to handle goods under conditions as yet far too severe

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for the local trade. The axiom of self-preservation is terribly local, and the dealers will oftentimes overlook the merit for the favorable conditions offered.

FAIR DEALING ESSENTIAL.

This present difficulty will no doubt right itself when the time comes for energetic action on the part of our exporters. The assistance of the commercial bodies above mentioned will be a potent factor in opening up new fields to American products. The personnel of such organizations, composed as they are of successful and expert business men along many lines, having an exact knowledge of what they want, can bring about, by hint or suggestion, an investigation through the consular officer that would prove valuable to the home trade seeking foreign fields as well as increase the plane of usefulness of the officers abroad who are ever ready to follow up any suggestion issuing from an authoritative source. When once we enter into the foreign market our success is assured. The loss of prestige will be entirely due to our own negligence. It will be always necessary to put in our best qualities, to follow samples closely and deal fairly with the foreign buyer. Any deviation from the usual American fair dealing will be taken up by our trade rivals and heralded throughout the European world of commerce to our detriment. Our rivals have already begun to decry our products, and they are ever on the watch to detect the least flaw in our goods or our system of business that will reflect in any way upon the American article.

CORN THREATENED.

AMERICAN EXPORTERS CHARGED WITH GROSS CARELESSNESS.

After the United States has exhausted every effort to secure markets for American maize or Indian corn in Europe, it is rather discouraging to read reports that accuse United States shippers of a most reprehensible degree of carelessness in shipping corn. Grain dealers in England and all over continental Europe complain about the condition of the corn that comes to them from the United States. Reporting on this subject, Consul Diederich, of Bremen, Germany, writes:

The "Komitee van Graanhandelaren" (the committee of grain dealers) at Rotterdam sent a circular letter, on April 5, to a number of the largest European trade centers, complaining of the bad condition of American maize delivered at their port, the quality of which does not at all correspond with the accompanying certificates issued by and under the authority of the American boards of trade and chambers of commerce. The committee states that this deplorable condition is felt all the more keenly, as under the business rules that now govern the purchase of said article, no legal objections can be raised against certificates covering such shipments. In conclusion, the author of the circular letter requests European buyers of American maize to take joint steps in order to bring about a change in the method of buying that American commodity.

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COOPERATION TO SECURE CORRECTION.

The produce exchange at Krefeld has taken this matter in hand and has learned that the same complaints are made in England, France, Denmark, Sweden, etc. The London Corn Trade Association, in giving its opinion on the matter, states that the only remedy for these evils is not to buy according to certificates and to insist upon other terms. A convention of German dealers in grain thereupon issued an address to similar associations in Belgium, Denmark, Germany, Great Britain, Holland, Norway, Sweden, and Austria-Hungary, asking for their cooperation in determining not to buy maize or corn of the United States of America in the future on the basis of certificates, but solely on the condition that the grain be found of good and sound quality when delivered in the European markets.

For years such complaints on the part of importers of American corn or maize have been loud and numerous. The certificates covering these shipments in many instances proved to be utterly false, the grain upon arrival here frequently being in a wretched condition—damp and overheated, moldy and filthy. As the firms to whom these shipments were consigned could find no redress anywhere, their losses were very heavy. Time and again American consuls have sent in reports on this subject, warning our people interested in the export of this particular grain not to ship any but corn of prime quality, but to the present time all efforts in this direction have been of no avail.

From the foregoing it will be seen that the dealers of Europe have become weary of protesting any longer against the American way of doing business in this line, and are now ready to join hands in insisting in getting what they bargain and pay for. They demand a square deal, and they ought to get it. In view of the large bumper crop of corn which is now being garnered in to be offered for sale in the markets at home and abroad, it would be well for our home dealers to be prepared for a change in the methods of selling American corn to foreigners, and to make up their minds that it will be to their interest to ship no corn across the ocean except it be fully ripe, fully dry, and well protected while in transit.

GERMAN AND FRENCH POSTAL SYSTEMS.

MORE BUSINESS IN GERMANY, BUT GREATER PROFITS IN FRANCE.

Consul E. Theophilus Liefeld, of Freiburg, Baden, sends comparative statistics on the activities of the French and German postal systems. A specially interesting fact is found in the tremendous quantity of picture postal cards (1,171,840,000) which annually encumber the German mails. He writes:

The German papers have been giving their readers a comparative study of the post-office departments in the two countries, much to the advantage of the German system. In Germany there are 56,367,000 inhabitants, while in France there are only 38,962,000. In Germany the number of post-offices is 0.82 to every 1,000 inhabitants, and 4.3 officials to every 1,000 people; in France the number is only 0.29, and

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only 2.1 officials to every 1,000 inhabitants. In Germany there were 78,431 letters to every 1,000 persons, and in France, 64,552. Germany far surpasses France in the sale and manufacture of picture postals, which probably accounts for the fact that Germany sent 1,171,840,000 postal cards and France only 73,600,000.

As regards packages with value stated, 367 for every 1,000 inhabitants were sent in France, with a value of $30,259.89, and in Germany only 239, but with a value of $77,369.26.

Germany sent 2,944 postal money orders for every 1,000 persons, representing a value of $42,072.26, and France sent only 1,208, representing a value of $8,700.44, from which it would appear that in France more than in Germany large amounts are sent by means of bank drafts instead of money orders. The German post-office also makes more use of the system of collecting on delivery of packages or letters (Post-Nachnahme). The German seems to make more use of the telephone, while the Frenchman prefers the telegraph.

RECEIPTS AND EXPENDITURES.

Although the work of the German post-office is much greater than that of the French, the net receipts are far less, from which the conclusion is drawn that the German post-office is managed for the benefit of the people and the French post-office for the financial gain to the Government. During the year from which the above facts are taken the receipts of the German post-office were $119,274,000, and the expenditures amounted to $107,308,000, a net income of $11,966,000; while in the case of France the amounts were respectively $66,006,000 and $41,688,000, leaving a net profit of $24,318,000.

BALANCE OF TRADE.

EXAMINATION OF FACTS CONNECTED THEREWITH.

The following tables compiled in the Bureau of Manufactures tell the story of the trade movement measured by goods. Of course the balance is by no means as large as it seems, for it is considerably diminished by the money sent abroad in dividends to investors in our mills, railroads, etc. It is also offset by large sums spent by American travelers in almost every European country from the North Cape in Norway to Sicily or Southern Italy. Still another factor militating against the United States is the vast sums paid by American merchants and manufacturers to foreign ships. It is doubtful whether any balance would be left after setting all the sums above noted over against the $452,125,714 in our favor. Any way, whatever the result of such a comparison, there can be no doubt that the payments referred to reduce the millions to a much smaller sum.

Another point to which attention ought to be directed is, that many of these extra millions are derived from raw products that could or ought to be worked up at home. Our exports of raw cotton, $370,800,000; oil, $72,487,546, and the raw materials of commerce constitute the bulk of all we export. Our manufactures will hardly amount to more than a third of all we send away. When it is remembered that England buys cotton of us worth $150,000,000 and exports

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cotton goods valued at nearly $400,000,000, it is time to ask whether a balance of trade based upon such conditions is not a cause for alarm and investigation rather than cause for congratulation. The whole problem is one that merits careful consideration. It is time to ask how many of these millions sent now as raw material might be converted into manufactured products by the spinners and weavers of New England and the South. The advantages possessed by England in her moist climate has been overcome by artificial processes or vaporizers, that put it in our power to spin and weave as fine yarns as does any country on earth.

INTERNATIONAL BALANCES.

The following table shows how balances stand for 1904 between the United States and the several countries named:

	In our favor.	Against us.
Austria-Hungary		$2,147,407
Belgium	$18,203,487	
Denmark	13,359,285	
France	2,869,133	
Germany	105,592,438	
Italy	2,561,959	
Netherlands	52,658,784	
Russia	7,506,415	
Spain	7,416,171	
Sweden	6,062,770	
Switzerland		19,263,183
Great Britain	371,555,231	
Canada	79,682,194	
Mexico	2,211,445	
Cuba		49,605,953
Argentina		7,066,856
Brazil		65,105,889
Chile		5,950,953
China		16,482,649
British East Indies		41,001,646
Dutch East Indies		8,715,954
Hongkong		8,939,342
Japan		21,557,057
British Australasia	20,267,088	
Philippines		7,234,047
British Africa	15,230,300	
Total	705,196,650	258,070,936
	258,070,936	
Our favor	452,125,714	

CATALOGUE SYSTEM.

A COMMENDABLE MOVEMENT.

Consul Ledoux, of Prague, Austria, has installed a card and catalogue system in his office for the registration of catalogues and general information of parties desiring to engage in trade with the United States. Commenting on the enterprise of Consul Ledoux, Der Einkäufer, Berlin, says:

The American consul at Prague, Urbain J. Ledoux, has, on the pattern of a chamber of commerce, established a special bureau called the commercial intelligence department of the Prague consulate, affording

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every opportunity for the registration and examination of catalogues of all kinds, and so arranged that importers and exporters can be posted immediately upon the possibility of their doing business.

The catalogues, prices current, discount sheets, etc., must naturally be so arranged that anybody seeking information can find it at once. Catalogues without prices or discount sheets would be useless; moreover, the weights and measures should be reduced to the standards adopted in the country of destination. Lists of references should also be added.

The catalogues and other printed matter are classed according to the different branches, so that the visitor may easily find what he wants. In order that the filing can be done effectually, it is necessary that parties sending printed matter should at the same time advise our consuls regarding the various specialties they handle, so as to save tedious searching and to facilitate registration.

In bringing this new form of commercial propaganda to the notice of our readers, we can but invite them to join a movement which, under modern circumstances, can be but productive of beneficial results.

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The publications made up chiefly of reports from United States consular officers in foreign countries include the following:

COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.
REVIEW OF WORLD'S COMMERCE, being a summary of the annual reports contained in COMMERCIAL RELATIONS.
DAILY CONSULAR AND TRADE REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the press, commercial and industrial organizations, manufacturers, etc.
MONTHLY CONSULAR AND TRADE REPORTS, issued monthly, containing miscellaneous reports from diplomatic and consular officers.
SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

The above consular reports were until July, 1903, issued by the Bureau of Foreign Commerce of the State Department; from that date until June, 1905, they were issued by the Bureau of Statistics of the Department of Commerce and Labor, with which the Bureau of Foreign Commerce of the State Department was consolidated July 1, 1903; since July 1, 1905, they have been issued by the Bureau of Manufactures, Department of Commerce and Labor. For details of these publications, the subjects of which the special reports treat, and the reports remaining for distribution, address "Chief, Bureau of Manufactures, Department of Commerce and Labor, Washington, D. C."

The publication of the reports on special subjects, in separate form, was begun in 1890. Those of the following titles are now available for distribution:

Vol. 2 (1890 and 1891).—Olive Culture in the Alpes Maritimes.
Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe; Rabbits and Rabbit Furs in Europe; Cultivation of Ramie in Foreign Countries.
Vol. 20 (1900).—Part I. Book Cloth in Foreign Countries; Market for Ready-Made Clothing in Latin America; Foreign Imports of American Tobacco; Cigar and Cigarette Industry in Latin America. Part II. School Gardens in Europe.
Vol. 21 (1900).—Part I. Foreign Markets for American Coal. Part II. Vehicle Industry in Europe.
Vol. 23 (1901).—Part I. Gas and Oil Engines in Foreign Countries. Part II. Silver and Plated Ware in Foreign Countries.
Vol. 24 (1902).—Creameries in Foreign Countries.
Vol. 25 (1902).—Stored Goods as Collateral for Loans.
Vol. 26 (1903).—Briquettes as Fuel in Foreign Countries.
Vol. 27 (1903).—Markets for Agricultural Implements and Vehicles in Foreign Countries.
Vol. 28 (1904).—Commercial Travelers in Foreign Countries.
Vol. 29 (1904).—Macaroni Wheat in Foreign Markets.
Vol. 30 (1904).—Emigration to the United States.
Vol. 32 (1904).—Foreign Markets for American Fruits.
Vol. 33 (1905).—Industrial Education and Industrial Conditions in Germany.
Vol. 34 (1905).—Marketing Goods in Foreign Countries.
Vol. 36 (1905).—Foreign Markets for American Cotton Manufacturers.
Vol. 37 (1905).—Machine-Made Lace Industry of Europe.
Vol. 38 (1905).—Insurance in Foreign Countries.

Of the MONTHLY CONSULAR REPORTS, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Department will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, franking labels to be used in lieu of postage in the United States, the Philippine Islands, Hawaii and Porto Rico will be forwarded.

Persons receiving CONSULAR REPORTS regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to CONSULAR REPORTS should be carefully addressed, "Chief, Bureau of Manufactures, Department of Commerce and Labor, Washington, D. C."

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VALUES OF FOREIGN COINS AND CURRENCIES.

[As given by the Director of the United States Mint and published by the Secretary of the Treasury, October 1, 1905.]

COUNTRIES WITH FIXED CURRENCIES.

Countries.	Monetary unit.	Value in U.S. gold, 1905.	Coins.
Argentina	Peso	$0.96,5	Gold—argentine ($4.82,4) and ½ argentine; silver—peso and divisions.
Austria-Hungary	Crown	.20,3	Gold—20 crowns ($4.05,2) and 10 crowns.
Belgium	Franc	.19,3	Gold—10 and 20 francs; silver—5 francs.
Brazil	Milreis	.54,6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
British N. A. (except Newfoundland)	Dollar	1.00	
British Honduras	do	1.00	
Chile	Peso	.36,5	Gold—escudo ($1.825), doubloon ($3.65), and condor ($7.30); silver—peso and divisions.
Colombia	Dollar	1.00	Gold—condor ($9.647) and double condor; silver—peso.
Costa Rica	Colon	.46,5	Gold—2, 5, 10, and 20 colons ($9.30,7); silver—5, 10, 25, and 50 centisimos.
Cuba	Peso	.91	Gold—doubloon ($5.01,7); silver—peso (60 cents).
Denmark	Crown	.26,8	Gold—10 and 20 crowns.
Ecuador	Sucre	.48,7	Gold—10 sucres ($4.8665); silver—sucre and divisions.
Egypt	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland	Mark	.19,3	Gold—10 and 20 marks ($1.93 and $3.85,9).
France	Franc	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Mark	.23,8	Gold—5, 10, and 20 marks.
Great Britain	Pound sterling	4.86,6½	Gold—sovereign (pound sterling) and half sovereign.
Greece	Drachma	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	Gourde	.96,5	Silver—gourde.
India	Pound sterling [a]	4.86,6½	Gold—sovereign (pound sterling); silver—rupee and divisions.
Italy	Lira	.19,3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Japan	Yen	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia	Dollar	1.00	
Mexico	Peso	.49,8	Gold—5 and 10 pesos; silver—peso and divisions.
Netherlands	Florin	.40,2	Gold—10 florins; silver—½, 1, and 2½ florins.
Newfoundland	Dollar	1.01,4	Gold—$2 ($2.02,7).
Norway	Crown	.26,8	Gold—10 and 20 crowns.
Panama	Balboa	1.00	Gold—1, 2½, 5, 10, and 20 balboas; silver—peso and divisions.
Peru	Sol	.48,7	Gold—libra ($4.8665); silver—sol and divisions.
Philippine Islands	Peso	.50	Silver—peso, 50, 20, and 10 centavos.
Portugal	Milreis	1.08	Gold—1, 2, 5, and 10 milreis.
Russia	Ruble	.51,5	Gold—imperial ($7.718) and ½ imperial ($3.859); silver—¼, ½, and 1 ruble.
Spain	Peseta	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden	Crown	.26,8	Gold—10 and 20 crowns.
Switzerland	Franc	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Piaster	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	Peso	1.03,4	Gold—peso; silver—peso and divisions.
Venezuela	Bolivar	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

COUNTRIES WITH FLUCTUATING CURRENCIES. [b]

Country and monetary unit.	Jan. 1, 1905.	Apr. 1, 1905.	July 1, 1905.	Oct. 1, 1905.
	Cts.	Cts.	Cts.	Cts.
Bolivia:				
Silver boliviano	43.1	43.9	42.2	44.1
Central America:				
Silver peso	43.1	43.9	42.2	44.1
China:				
Amoy tael	70.7	71.9	69.1	72.4
Canton tael	70.5	71.7	68.9	72.2
Chefoo tael	67.6	68.8	66.1	69.2
Chinkiang tael	69.0	70.3	67.5	70.7
Fuchau tael	65.4	66.5	63.9	66.9
Haikwan (customs) tael	71.9	73.2	70.3	73.6
Hankau tael	66.1	67.3	64.7	67.7
China—Continued.				
Hongkong tael	(c)	(c)	(c)	(c)
Nankin tael	69.9	71.2	68.4	71.6
Ningpo tael	67.9	69.1	64.8	.....
Niuchwang tael	66.3	67.4	66.4	67.9
Peking tael	68.9	70.1	67.4	70.6
Shanghai tael	64.5	65.7	63.1	66.1
Swatow tael	65.3	66.4	63.8	66.9
Takau tael	71.1	72.4	69.5	72.8
Tientsin tael	68.5	69.7	67.0	70.1
Persia:				
Silver kran	7.9	8.1	7.8	8.1

[a] The rupee, $0.3244½, 15 to the sovereign, constitutes the money of account.

[b] The coins of silver-standard countries are valued by their pure silver content, at the average market price of silver for the three months preceding the date of the circular issued by the United States Treasury Department.

[c] The "British dollar" has the same legal value as the Mexican dollar in Hongkong and Labuan.

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DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF MANUFACTURES

MONTHLY CONSULAR AND TRADE REPORTS

DECEMBER, 1905

No. 303

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1905

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MONTHLY CONSULAR *and* TRADE REPORTS

Washington, D. C. DECEMBER, 1905 No. 303

AMERICAN SHOES.

MARKETS ABROAD FOR AMERICAN FACTORIES.

Numerous reports were received this month from our consuls in various sections of the world in regard to the presence of American-made shoes in their respective districts. These reports explain the popular feeling regarding the American product, and where our shoes are not offered for sale information is furnished which will enable our manufacturers to make efforts to extend their trade. In many cases lists of firms are given who handle or who may be willing to handle shoes of American make.

THE ORIENT.

AN ENCOURAGING FIELD IN CHINA.

UNITED STATES CAN DOMINATE THE ORIENTAL MARKET—RELATIVE POPULARITY OF DIFFERENT MAKES—CHEAP PRODUCT OF JAPAN.

The following letter from Special Agent Burrill on the shoe trade in China furnishes information that will interest manufacturers and dealers in boots and shoes. The American makes and styles are popular, and with proper and intelligent effort this popularity can easily be maintained. To this time the shoes imported are mainly purchased by foreign residents, comparatively few natives having adopted modern shoes. It is very probable, however, that in the near future Chinamen will adopt the modern footwear, and in that event there will be an almost unlimited market for the sale of boots and shoes in China. Mr. Burrill points out rules that should be followed in packing and shipping, and directs attention to carelessness on the part of American transportation companies in the handling of merchandise intended for the Orient that can not be too speedily corrected. His letter follows:

In the importation of ready-made shoes into China the United States has a commanding lead, and according to merchants who handle these

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goods this lead can be largely increased if cordial cooperation between the dealers and manufacturers can be more firmly established. The American shoes are well known and popular among all nationalities represented in Shanghai, and this applies to all treaty ports. In spite of the fact that the Americans constitute only about 10 per cent of the foreign population of Shanghai, there has been a steady and gratifying growth in the trade which is ascribed to the style, shape, and comfort of the American product. The prices are high as compared with those at home, and average for American lace, button, or Oxford, $10 Mexican. English lace, button, or Oxford sell for $6 to $16 Mexican, and German lace, button, or Oxford, from $12 to $14 Mexican. Because of the warm weather, which prevails a large part of the year, the low-cut shoes are popular among the men, while the women show a decided preference for the Oxford.

VEXATIOUS DELAYS IN SHIPPING.

In order to facilitate trade, shipments, conforming as nearly as possible to the styles ordered by the Shanghai dealer, should be made promptly and expeditiously. The goods should be properly packed so that they may reach their destination in first-class condition, and large shipments should be avoided. The climate has a tendency to eat or rot the leather, causing it quickly to mildew or mold, and for this reason dealers here prefer to carry a small stock, which should contain, however, as complete an assortment of the various popular styles and shapes as possible. Complaints are frequent as to the length of time necessary to secure a consignment of goods. Occasionally the manufacturers, through negligence or a scarcity of the styles required, are at fault, but the blame lies chiefly, according to the dealers in central and northern China, with the transportation companies. Instances may be cited where it has taken three or four weeks to ship a consignment from the factory in the East to the Pacific coast, and on arrival there it is delayed to suit the convenience of the steamship company. Such delays are naturally the cause of embarrassment to the consignees, and not infrequently they result in serious financial loss.

DEFICIENT TRANSPORTATION FACILITIES.

Merchants in Shanghai and central and northern China generally express the hope that the American manufacturers may exert themselves to obtain better transportation facilities from the railroads and steamship lines, which, it can be readily seen, would benefit not only the shipper but the dealers as well. The difficulties in having orders from Shanghai filled may be illustrated by the fact that it takes approximately a month for a letter containing the order to reach the Atlantic coast. One month is then necessary for manufacturing the goods, and an additional two or three months must elapse before the shipment can reach its destination in China. These delays are vexatious and inimical to American trade, and yet despite these disadvantages the industry has prospered. It is certainly fair to assume that the exercise of greater care in shipments, with the partial if not complete elimination of unnecessary delay in transportation, would insure a larger measure of success in this market.

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POPULAR STYLES.

The "K" and the "Dawson" shoe, both of British make, arepopular here among the English, and in order to meet this competition the dealers in American shoes order goods that correspond somewhat in shape, style, and finish. They have been successful, too, in this effort, and number among their patrons many English subjects. This applies also to the French, but practically no attention has been paid to the German style of shoe for the reason that the market is small and unremunerative. A German will buy a shoe made in Germany and sold by a German importing firm if a search will enable him to discover it, and all other goods of German manufacture commend themselves to him fully as much. This characteristic of the Germans is noticeable everywhere in the Orient, and their method of fostering and promoting trade unquestionably accomplishes the results desired. Chinese and Japanese shoemakers are well patronized by foreigners, for they make a good shoe at a price with which the retail dealer can not compete. They are wonderful imitators, and all that is necessary is to give them a model, from which they will make an almost perfect reproduction from leather imported from the United States, England, or Australia. Because of the cheap labor the cost of a pair of shoes manufactured in this manner is astonishingly low.

INSTRUCTIONS AS TO PACKING.

In 1904 there were imported into Shanghai 21,468 pairs of leather and canvas shoes and boots valued at haikwan taels 56,890 or, figured at 66 cents in American money as the equivalent of one haikwan tael, $37,547. There were also imported approximately $10,761 worth of India rubber shoes and boots for the corresponding period. A duty of 5 per cent is collected on every pair of shoes imported, and this applies not only to the United States, but to other countries. On landing, the goods may remain in the warehouse of the steamship company for ten days free of charge, but if not removed at the expiration of that time a fixed rate is charged which requires payment for a month even though the delivery of the cargo may be delayed only one day over the ten days allowed. The insurance company with which the cargo is insured will, if requested, usually extend the protection to cover the ten days storage in warehouse before delivery, but insurance rates in Shanghai have risen from one-half per cent in 1902 to 1.1 per cent in 1905.

Shoes should be shipped from the United States to China in strong pine boxes which will contain from three to four dozen pairs. Each pair should be inclosed in a cardboard box. The outside boxes should be lined with extra thick cardboard, and around each end should be fastened an iron band. This method of packing is regarded as sufficiently strong to withstand the rough handling of transshipment, and goods so protected usually arrive at their destination in good condition. Shoes ordered from the interior of China are sent through the Chinese post-office from Shanghai for 20 cents Mexican to any part of the Empire. The package (which is supposed to weigh approximately 3 pounds) can be insured if desired at 1 per cent, but this is not deemed necessary in transshipment to treaty or river ports. When, however,

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a parcel is sent to the interior by native carriers it is advisable to insure against possible loss. The rates of exchange affect alike all nations which have adopted a gold standard, and in consequence the daily fluctuation is neither in favor of nor against the dealer in the American product.

SYSTEM OF CREDITS.

The retail merchant here finds a practically universal system of credits for small amounts which rarely results in loss, but on the contrary places an additional valuation of approximately 5 per cent on each article sold. As a matter of fact, if a resident of Shanghai pays cash for an article marked at $5 the purchase price actually amounts to $4.75, and this practice of signing "Chits," so-called, or an I. O. U., as it would be understood in the United States, is almost universal among the foreigners. Settlements are made monthly. It must be remembered, however, that the Shanghai merchant is usually compelled to pay for his goods cash against documents—that is, he places the money for the consignment in the hands of the bank through which the American shipper transacts his business before delivery is made. This system, demanding cash for the purchase and credit for sale, obviously worksa hardship on the importer, as it prevents him from realizing on his goods, even in part, before paying for them.

THE BEST METHOD TO PURSUE.

The American Shoe Company in Shanghai deals exclusively in foot wear and is the only house operating in this way. Other firms carry shoes as a side line, and still others take orders on commission, charging approximately 2½ per cent on the transaction. The Chinese merchants usually order the small stock that they carry through these commission houses. Representatives of American shoe factories occasionally call at Shanghai, but they carry, the dealers declare, a limited and unsatisfactory line of samples. The average traveling man in China does not confine himself to any particular line of goods, representing as he does several houses selling different commodities. The best and most satisfactory method to pursue in operating a shoe business in Shanghai, or at any of the treaty ports of central or northern China, is evidently by direct order from the factory, thus insuring comparatively up-to-date and salable goods.

CHEAP PRODUCT FROM JAPAN.

Comparatively few Chinese in modern circumstances now wear foreign shoes, and it will be a difficult task to educate them along these lines. They are satisfied with the cheap, comfortable native shoes which custom prescribes and economy dictates. Natives who wish to adopt the foreign style of shoe generally demand the lowest price, regardless of quality or durability. The Japanese, with their cheap labor and low freight rates to Chinese ports, have taken advantage of this demand and are exporting shoes to China which can be sold at retail for $4 Mexican and still enable the dealer to make a fair margin of profit. The workmanship is poor, the leather of inferior quality, and they remain serviceable but a very short time. In spite of these drawbacks, however, it is predicted that they will become popular

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among the native buyers. Cheap English shoes, which retail here for $6 Mexican, and are apparently made only to wear out as quickly as possible, are the only competitors in price, and it is only a question of time when they will be superseded by the Japanese product. Shoe dealers in central and northern China are unanimously of the belief that it would be useless for the American manufacturer to attempt to compete with this shoe, and that it would be far more profitable for them and for the merchants here to devote all their energies to extending the trade already established.

Shoes manufactured by the Chinese are all made of imported leather, for the reason that the few tanneries in the Empire are unable to turn out a satisfactory product. The leather is soft and spongy and practically useless for the manufacture of foot wear. Hides in abundance can be obtained in China, but, as the natives are ignorant of the proper method of tanning, comparatively few are retained in this country for that purpose.

ADMONITION TO MANUFACTURERS.

It is not advisable that American manufacturers should "manufacture for the export trade" if that term means the shipment to China of unsalable goods of an inferior quality. Our trade with the Orient must be handled with the utmost care in order that we may participate in the great commercial activity which is inevitable with the restoration of peace and the return of normal conditions. China presents a great field for American industrial invasion, but the time has passed when American manufacturers can afford to use this country as a dumping ground for goods that can not be disposed of elsewhere.

NO DEALERS IN NAGASAKI.

Consul Harris, of Nagasaki, reports that there are practically no dealers in leather shoes in his district. The consul says:

There are, however, a great many shoemakers who buy leather from dealers, who, in turn, buy from the importers, and until conditions change, of which there is no prospect, it will be, in my opinion, a waste of time and money endeavoring to secure orders in my district for American-made shoes in quantities that would prove profitable, as the demand for the foreign article is from foreigners only, who number, all told, about 500, and they mostly wear the Japanese-made shoe.

MANCHURIA.

AN ADVANCE STEP.

Consul Sammons, of Niuchwang, furnishes the following:

No leather shoes are manufactured in this district, except where a native undertakes to make a pair of shoes or boots from a foreign pattern, which is quite unusual. Leather-soled Chinese shoes are now sent to this market in very small quantities from Shanghai. Such a shoe is considered by the natives as a new style, or what in America we would consider an innovation. This, however, is an advance toward the further use of leather for footwear in the Orient.

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STRAITS SETTLEMENTS.

DEALERS AT SINGAPORE.

Consul-General Wilbur, of Singapore, furnishes the following list of importers, exporters, and dealers in that city. The firm of Ellis & Co. is an American concern and makes special efforts to push American products of every description.

H. J. M. Ellis & Co. (Americans), Behn, Meyer & Co., Behr & Co., D. Brandt & Co., Brinkmann & Co., H. Brauss & Co., Cadonau & Co., Dalmann & Co., Hieber & Co., Huttenbach Brothers & Co., Jaeger & Co., Katz Brothers (Limited), Kumpers & Co., Partile & Co., Rautenberg, Schmidt & Co., Shrager Brothers, John Little & Co. (Limited), Robinson & Co., Whiteaway, Laidlaw & Co.

INDIA.

Consul Morey furnishes the following list of reputable local boot and shoe dealers at Colombo:

I would mention as the most reputable local boot and shoe dealers Messrs. Cargills (Limited), The Colombo Apothecaries Company (Limited), Lime & Co., E. Cahill & Sons—all general dealers—who may be interested in American shoes; also Whiteaway, Laidlaw & Co.

AUSTRALIA.

NEW SOUTH WALES DEALERS.

Consul Baker, of Sydney, furnishes the following list of manufacturers of shoes and harness in that city:

Shoe manufacturers.—Henry W. Adlam, 63 King street, Sydney; E. Angelo, 9 Hunter street, Sydney; David Jones & Co., George street, Sydney; Anthony Hordern & Sons, Haymarket, Sydney; Callaghan & Son, 395 George street, Sydney; John Norris, 157 Parramatta road, Annandale.

Harness makers.—Arnold, 243 Pitt street, Sydney; John Brush & Son, George street, Sydney; Edward Butler & Sons, 30 Hunter street, Sydney; Albert Gregory, 40 Market street, Sydney; Frank Grimley (Limited), Clarence street, Sydney; Holdsworth, Macpherson & Co., George street, Sydney.

SOUTH AFRICA.

INVITING FIELD FOR OUR MANUFACTURERS.

The sale of British-made shoes in South Africa amounted to £721,866 for the first nine months of 1905, a sum equal to about $3,600,000. The demand is for the better grades. These run from $5 to $6 per pair are made of prime waxed calf, and are said to be every bit as popular as the more modern chrome-tanned leathers. There is a very

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good demand for ladies' wear running from $1.50 to $2.50, the great demand being for those that sell at $1.50 to $2. The more common grades of walking shoes, also canvas shoes, are selling well. Importers and buyers do not grumble at advanced prices, for they realize that goods used in the manufacture of leather and shoes have gone up in recent years to points that justify the advance. This indicates healthy trading conditions.

ATHLETIC GOODS POPULAR.

Among the articles that have secured the best sales at fair prices athletic goods come first. Cricket, cycling, tennis, and football boots and shoes have been in demand. The volume of trade in these lines has been large. Quite a large number of rubber-heeled and rubber-soled goods have been sold. Just now there is a tendency toward substituting a composition for the actual rubber. It remains to be seen whether this is to react favorably or unfavorably. The best-informed parties are against it. They advise their home producers to stick to the higher and better grade goods, as the demand for these is to be sure, safe, and constant. The low-priced goods should be given a wide berth, for the buyers are sure to give them such in the end.

One good suggestion made by an expert is that athletic goods be given leather insoles and stiffeners. This is all the more needed now, when, because of cheapening methods, cardboard and paper have been used.

SHOES FOR BOYS AND GIRLS.

Good shoes for school boys and girls have sold well, and will always sell well. This trade is worth working up. For girls a roomy, somewhat square-shaped lace or button bal. is sought or suggested. They should be in either black or tan glacé, or light box or willow calf. Such are finding a steady and improving demand. English manufacturers are said to be taking pains to put just the goods wanted on the South African market. The field is fairly large and is constantly growing. The tendencies are more and more toward imitation of American makes. If American goods are ever properly introduced, the better grades are bound to win their way in South Africa, as they are winning their way in so many places at home and abroad, on their merits.

THE UNITED KINGDOM.

ENGLAND.

FIRM FOOTHOLD IN GREAT BRITAIN—DECLINE IN WALES.

Consul Williams, of Cardiff, reports a falling off in the demand for American shoes in Wales. The decline, according to the consul, is due to the fact that British manufacturers are making good shoes on American models, and are trying to give them the American finish, elegance, and comfort, with added British durability. He says that it can not be learned how far the falling off has gone, as it is difficult to get at the actual facts. The consul relates that he found an assistant of a man whose report on the outlook for American shoes was as pessimistic as it was possible to make a report who was wearing American made shoes and boasting about them.

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This man admitted that once a person has put on and worn an American made shoe it is hard to get him to change. Evidently there are two sides to the question. It is advisable, however, for American boot and shoe makers to find out with what they will have to contend, not only in Great Britain, but in all parts of the world to which British made shoes are sent, for once aroused the British shoemaker will not rest until he has put his products on the best possible basis of production and sale.

OPPOSITION OF DEALERS.

Dealers who were seen determined to drive American made shoes out of the British market, and the public seem just as determined to have them; hence the opposition on the one side is met by a steady and clamorous demand on the other. One paper puts the matter quite forcibly and as unequivocally as figures can present it. The paper alluded to says: "There are still a number of silly people who state and affect to believe that there is no such thing nowadays as American competition in the shoe trade. * * * There is still a very lively and a growing competition, and mainly upon those classes of goods which bear a remunerative profit—that is, the upper grades. Nearly $700,000 worth of American shoes have been imported this year—a substantial gain over the year previous. The increase is significant in more respects than one, for whereas it is declared by nearly all our makers that the demand is for cheaper boots, our rivals are doing a bigger business than ever in the higher classes of footwear."

CAUSES FOR THE DECLINE.

Continuing, the consul says a number of causes have combined to produce the apparent falling off of the trade in Wales and part of England. There has been a natural awakening among the people of a tendency to favor home manufacturers. Besides, the adoption by British manufacturers of American models and American machines has enabled them to offer to the trade shoes that are "just as good," at least it is so claimed, as are those made in America. The copying has seemed fairly successful. It remains to be seen whether the position sought and claimed will be maintained.

If American manufacturers wish to maintain a position in the British market they will have to find out how firm a sole is suited to the soft, damp weather of the British Isles. A country that has 11 rainy days in June, 30 in October, and 244 in a year, distributed over the entire time, no month having less than 11 and most having 20 or more, is not suited to light or soft-soled shoes. Besides being easy on the feet, American shoes must be made to meet the rapid changes, not only of the British Isles, but of Continental Europe, for a point well worth attending to is that what one consular officer reports in regard to trade in American products is usually applicable to every country, if not in the matter of climatic conditions surely in general principles.

AFTER JAPANESE TRADE.

In conclusion, Consul Williams calls attention to the efforts of British manufacturers to secure the Japanese shoe trade. He speaks of an awakening among British manufacturers caused by American competion, and concludes by saying:

"The American shoe has secured a firm foothold in the United

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Kingdom, and it will be the fault of the manufacturers if it is lost. The high-grade shoe and the summer shoe have nothing to fear, for it is not in human nature to discard an 'easy' shoe. But the makers of medium and cheap grade shoes, and winter shoes in particular, must meet the climatic requirements to win and hold trade. A large proportion of the population wear the same shoe summer and winter, and a shoe that will satisfy them must have a wet-weather sole. A strong sole, it may be added, will help their trade at home, but it is indispensable that the sole should give satisfaction in this country, for a failure means the permanent loss of a customer. There is a movement among English manufacturers looking to the specialization of footwear. In the language of one of the trade journals, they 'want to make it as near compulsory as possible for the public to buy special footwear for both summer and winter, just as they do with clothing.' When this is accomplished a good winter shoe will be in demand, but even now such a shoe will find ready sale in the rainy belt of Wales."

ACUTE STAGE IN THE TRADE.

Consul Hamm, of Hull, reports the proceedings of the Incorporated Federated Associations of Manufacturers, and furnishes clippings from English newspapers which state that affairs have reached an acute stage in the English boot trade, and that the situation has become so critical that the public must of necessity be compelled to share the burden so long borne by manufacturers. Consul Hamm adds:

American boot and shoe manufacturers who are complaining of the high price of leather, and are ascribing it to the tariff on hides, will readily understand why the English manufacturers are uttering the same complaint, but are not able to ascribe their troubles to the same cause, as this is a free-trade country. They are seeking the same remedy, however, as the American manufacturer, and that is a rise in the price of boots and shoes.

In addition to the difficulties brought about by the increased prices of leather, London shoe manufacturers are now faced with a demand for higher wages on the part of operatives engaged in the lasting and finishing departments. Recently a meeting was held of the London conciliation and arbitration board to consider the following notice, handed in by the representatives of the workmen: "That the board do approve a minimum wage of $7.78 per week of fifty-four hours, to apply to the whole of the adult work people employed in lasting and finishing operations." The demand was refused, and on behalf of the manufacturers it was contended that it was impracticable to adopt a minimum wage scheme. Low wages, like free hides, do not, apparently, enable English boot and shoe manufacturers to compete with American manufacturers in the same line. The ruling wages in London lasting and finishing departments of boot and shoe manufactories is $7.30 per week.

COMBINE TO ESTABLISH RETAIL STORES IN EUROPE.

Consul Brittain, of Kehl, writes as follows regarding the organization of shoe manufacturers in England:

Several German newspapers have recently printed articles in reference to the shoe manufacturers' export association which is at present

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being formed in England. This export association—to which eight large manufacturing firms have already signified their intention of becoming members—is being formed with the sole object of establishing retail shoe stores in many of the larger and important cities of the various foreign countries. The attention of our American shoe manufacturers has frequently been called to this matter, the establishing of their own retail shoe stores in foreign cities, the very thing which the English manufacturers are now planning to do. The attention of the American manufacturers should again be called to this important undertaking. An exclusive American shoe store in Strassburg would doubtless do a good business, one where well known brands could be purchased for about 16 to 18 marks ($3.80 to $4.28) per pair, which would give the dealers good profit.

The papers also devote space to articles descriptive of a new society which has been formed in England. The object of this society is that its members should purchase English-made shoes and other goods in preference to manufactured articles of foreign countries. It is also the aim of this society, through the same means, to build up or reestablish such English industries and branches of business which have been ruined or exterminated by foreign competition—the great importation of foreign goods. At the head of this society stands Maj. Evans Gordon, a member of Parliament, through whose endeavors a law has recently been enacted preventing the admission into England of poverty-stricken and worthless foreigners.

DISTRIBUTIVE AGENCIES AT BRISTOL.

Consul Lathrop, of Bristol, does not think that adequate results would follow any attempt to develop business in Bristol by means of correspondence. He writes:

There is no general jobber here who is prepared to consider business. The wholesale dealers are local manufacturers or representatives of a single firm manufacturing elsewhere in England. The retail men are not disposed to import direct and are wedded to the routine of buying from travelers, who collect accounts periodically, adjust damage and allowances, and generally relieve buyers of correspondence and trouble.

There is another highly important consideration. Much attention has been attracted in this country to the importation of American made shoes, and those Massachusetts firms who have successfully entered this field have only done it by establishing their own distributive agencies. Their stores handle only their own makes. The result of their success was a shake up among English manufacturers, a large laying down of new plant—mostly American—and an adaptation of our styles and methods. The result is a keen competition and a market which can hardly be entered without a well thought out plan, personal presence, and probably the opening of retail stores in London and the principal provincial centers.

DEALERS IN HULL.

Consul Ham, of Hull, reports that there are few exclusively wholesale dealers in that city. He furnishes the following list of dealers,

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which includes wholesale and retail, and explains that correspondence with any of the parties named will elicit any information desired:

All named in the following list are located at Hull, England: Mrs. H. Addison, 324 Beverley road; T. Chapman, 11 Caroline street; R. L. Cowley & Son, 7 Silver street; W. Craft & Son, 150 Beverley road; W. Cussons (Limited), 18 Beverley road; E. Davis & Co, 45 Market place; R. & J. Dick, 89 Queen street; Garton & Walker, 16 Bond street; G. F. Grant & Co. (Limited), 58 Paragon street; M. S. Haller & Son, 50 Market place; Manfield & Sons, 13 Whitefriargate; Maw, Till, Kirke & Co., 31 Charlotte street; Mrs. M. Merritt, 51 Savile street; Public Benefit Boot Company, Prospect street; C. G. Southcott, 18 Paragon street; Mrs. K. Stanton, 61 Market place; Stead & Simpson (Limited), 35 Caroline street; A. Tyler & Sons, King Edward street.

NOTTINGHAM.

Consul Mahin, of Nottingham, reports that an advance in leather prices has induced the Incorporated Federated Associations of Boot and Shoe Manufacturers of Great Britain to issue a notice to their members, numbering about 800 of the largest establishments in the country, to the effect that it is imperative that every manufacturer should insist upon advances in the prices of boots and shoes in proportion to the increased cost of material. The secretary of the association adds to the circular the following notice:

"The public should be warned that the only way in which boots and shoes can be supplied at old prices is by reducing the quality by the use of inferior and adulterated leather. It is confidently anticipated that the public only require to be made acquainted with the existing conditions of the leather market to induce them to pay adequate advances."

Commenting on this action, Consul Mahin says:

This would seem to be a highly favorable opportunity for pushing the sale of American shoes in this country. From appearances in this city that sale is languishing somewhat. It needs personal stimulus from energetic representatives of American factories sent hither for the special purpose of placing the trade on a sound and permanent basis.

IRELAND.

AMERICAN MAKES IN FAVOR.

Consul Knabenshue writes that Belfast is the importing point for his consular district, comprising the ten northern counties of Ireland. He says:

A few years ago United States manufacturers made a strong effort to push the sale of their boots and shoes in the United Kingdom. What we call in the United States "boots" are here named "top boots." Our "high shoes" are here called "boots," while our "low shoes" are denominated "shoes." The more comfortable fit of the American goods, their better shape, and low price, due to machine

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manufacturing, caused them to be received with such favor that the British manufacturers were compelled to meet this trade invasion. To do this they adopted the American models for their goods, and so advertised them. It is common to see in shop windows here placards which advertise "British made shoes, American cut." The result was a reduction of imports, as shown by the following, which I quote from the "Review of Belfast trade and commerce during 1904," printed in the issue of a leading Belfast newspaper for January 1 last:

"The boot trade, which now makes a large turnover in all wholesale drapery concerns, has made further strides toward maintaining the sale of homemade boots. The American houses, which made a strong attempt to push our home-manufactured goods to one side, are not now making progress to the extent anticipated. At the outset it can not be questioned that the improved style of the boots and the greater comfort in the wearing of them was a great inducement to many people to purchase them, but our home manufacturers soon got to see where the advantage came in, and now, apart from the absolute superiority of home-tanned leather, it would be difficult to discern the difference between an American made boot and one made at our very doors."

For the calendar year ended December 31, 1904, the total imports of footwear were 2,643 tons. The accounts are kept by weight, and I have no means of knowing how many cases or pairs the above weight represents.

LIST OF DEALERS.

The following list of shoe dealers embraces all the first-class firms in Belfast:

F. Abbott & Co. (Limited), 9 Donegall place; American Shoe Company, 19–21 Wellington place; John Arnott & Co., 26–32 High street; John Balmer & Co., 26–28 Ann street; Bradley & Robb, 56 Victoria street; R. & D. Beverland, 13 North street; Edward Birney, 71–73 North street; David W. Corry, 38 Queen street; M. Moore, 11 Donegall street; John Mulholland & Co., 204 Newtownards road; George McAfee & Son, 14 Corn Market; McCann's Boot Warehouse, 121 Shankill road; Hugh McKeown, 167 North street; John McViker, 97 Victoria street; New York Shoe Company, 56 North street; J. Robb & Co. (Limited), 1–15 Castle place; Robertson, Ledlie, Ferguson & Co. (Limited), Bank Buildings, Castle place; John Smith, 207 Lisburn road; J. Tyler & Son, 29 Royal avenue.

SCARCITY OF HIDES.

SHARP ADVANCE IN PRICE OF LEATHER.

Consul McNally, of Liege, Belgium, sends the following, taken from the London Daily Mail, on the increased price of hides:

A meeting of the Bristol and West of England Tanners' Federation has decided that the prices of leather are very unsatisfactory, and that the high prices of hides make it imperative to obtain a substantial advance in the price of leather. American sole leather has advanced 10 to 15 per cent, and what are called "American wax splits," used for the uppers of the workingman's heavy boot, have in the last six weeks gone up from 18½ cents to 23 cents a pound. "Every item in the cost

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of the boot," said an expert, "costs from 15 to 20 per cent more than it did twelve months ago." At present this has had no appreciable effect upon the price of boots and shoes to the public, but it has had an effect in the depreciation of the standard article sold at a standard price. Leather substitutes have been used, such as cardboard, but it is a question whether the tanners and the boot manufacturers can go farther in meeting the demands of the large retail houses for boots and shoes at the present wholesale prices.

CAUSES FOR SHORTAGE.

Of the two principal causes of the shortage of hides, one is the recent Russo-Japanese war. Japan had to provide footwear for an army of men accustomed to wear straw sandals. They made their own boots of such an excellent quality that they are still the admiration of English bootmakers. In doing so they drew on the world's supply of tanned hides and the effect still remains. The second determining factor is the American meat market. Chicago packers regulate the slaughter by the demand for meat. There have been large stocks in the refrigerators and fewer cattle have been killed. The result has been fewer hides. Six years ago hides which were selling at about 8 cents a pound are now realizing 15½ cents, or a higher price than the beef itself. Chicago rules the world's prices for hides. "There can be no doubt," as was remarked by a well-informed man, "that the English tanners are losing money and that the boot manufacturers are in a bad way owing to the difficulty of forcing a higher price out of the largest buyers or retailers." A combined movement of tanners and makers might force up the price of boots and shoes to the public.

CONTINENTAL EUROPE.

NORWAY.

DELINQUENCIES OF MANUFACTURERS AND EXPORTERS.

Consul Cunningham, of Bergen, writes that at the present time there are no dealers in that city who keep in stock American shoes. The consul made inquiries of the manager of a firm who formerly kept quite a large line of American shoes to learn why the trade had been discontinued. The result of his inquiry is given as follows:

The manager informed me that he had no complaints concerning the terms extended to him by the American manufacturer, which were entirely satisfactory, and the shoes themselves were popular, especially the ladies', but other conditions were such that it rendered it, as he thought, impractical for him to continue to attempt to keep a line of American shoes any longer. To begin with, the European houses sent their representatives with sample shoes twice a year to see the merchants, which enabled them to see exactly what goods they desired and also, since the transportation was within four or five days of Bergen, it enabled the seller to give satisfactory assurance of the date on which the goods should be received, while in the case of the Amer-

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ican manufacturer it was necessary for him to buy from an illustrated catalogue without assurance as to the date upon which he could receive his shoes.

In a measure, he said, the American exporter was to blame, while transportation companies increased the difficulties. The manufacturer was very slow in filling his order. Often weeks elapsed before he received invoice of his shipment, and then from New York it took from two weeks to as many months to reach Bergen, thus rendering the goods, in some instances, unseasonable. He also gave me one instance where he ordered goods from a catalogue, and he was informed that that particular style had been exhausted and so something else was substituted quite similar, but to his mind it was very unlike.

He was inclined to think that another difficulty was that, owing to the small amount of his order, the American manufacturer could not afford to give it the attention it should have in order to satisfy him and his customers; that the American manufacturer was looking for larger things, and he doubted very much whether there could be a trade worked up in American shoes which could be attractive to the American manufacturer if he considered only Bergen. He said that his entire trade in foreign-made boots, shoes, slippers, etc., amounted to about $3,000 or $4,000 per annum, and that his was the largest of any house in Bergen.

STOCK AND SAMPLE ROOMS NEEDED.

If any American house had a stock room at some point in Norway, where the transportation question should be eliminated, so that the retail dealer might replenish his stock therefrom, there is no doubt but that in Bergen, as well as some other towns along this coast, there could be introduced with success the American shoe of finer grade retailing here at from $3.50 up. Of this class of goods there is no doubt but that in Bergen as well as other places considerable quantities could be sold, as the American shoe is popular, especially the ladies' shoes, and I am informed that many ladies in Bergen order their shoes from Christiania that they may procure the well-known shoe of the American manufacturer. The shoe made in Norway is wonderfully well adapted to general use, and since the duty is so high it would not be possible to sell the cheaper grades of shoes such as are generally used by the general run of people. It would be the better class who could buy the American shoes.

I have thought that if the American manufacturer could send a sample shoe to reliable firms in places where the business is not sufficient to send a salesman, he could meet with a moderate degree of success where catalogues fail, but the suggestion above made by a dealer about a sales room in some part of Norway would prove very beneficent to the American shoe trade here.

I inclose a list of the Bergen shoe dealers and have tried to name only the leading firms, and some of these are only shoemakers who keep a force of workmen, replenishing their stock from their own hand factory. A few others are sustained by a local or other Norwegian factory, and none are exclusive importers, but all import small quantities:

The West End Skotøietablissement, Chr. C. Krohn, Smaastrand-

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gadens Skotøiudsalg, A. Marthinussen & Co., W. Michelsen, A. O. Reistad, Scarborough, Ju, I. N. Piersen, Stavanger Skofabrikas Udsalg.

AMERICAN MAKES FREELY SOLD.

Consul Bordewich writes from Christiania that American boots and shoes are freely sold there and well liked. The larger portion is sold to Christiania dealers through jobbers in Denmark and Germany. In some Norwegian factories American shoemaking machinery has been installed, but the goods produced are inferior to the American article. The consul knows of no firm doing an exclusive wholesale business in boots and shoes. He furnishes a list of retail dealers of whom some do a large business and some of whom sell to country dealers in small lots. He believes that an active agent from the United States would promote the American interests. He names the following persons who would be suitable agents at Christiania for American houses. They are:

Hoyer & Hargreaves, Kirkegaden, 8; Sverdrup Engelschion, Kongens gade, 13; Carl B. Prøch, Prinsens gade, 23.

Following are the principal shoe dealers in Christiania: Grändsens Skotøimagasin, Grändsen 12; Rudolphs Eftfl, Karl Johans gade 23; Steen & Strøm, Kongens gade 23; Adelsten Jensen, Torvgaden 1; Gunerius Pettersens Magasin, Storgaden 32; H. Horn & Co., øvre Slotsgade 21; L. H. Krefting, øvre Slotsgade 23; A. Ridder, Akersgaden 35.

SWEDEN.

STORES SHOULD BE ESTABLISHED.

Consul Bergh, of Gothenburg, reports that American shoes are sold in his district, but that progress is somewhat retarded by high prices demanded. He thinks that if American manufacturers would be satisfied with smaller profits and offer their shoes below prices now prevailing the trade would be increased. He writes:

Three or four years ago I got a firm here to start importation and sale of American shoes, and they have sold a considerable quantity. But the trouble is that they charge from $6.70 to $9.38 a pair for these shoes, consequently only well-to-do people can afford to buy them. Box-calf leather and lasts are imported from America by the Swedish shoe manufacturers, and their products are often sold under the name of "American shoes" at retail prices ranging from $4.02 to $5.35 per pair.

The import duty is an impediment. I am told that the customs officials construe the tariff so that box-calf shoes come under the heading of "shoes made of dyed (colored) skins," which are subject to a duty of 73 cents per pound, but in spite of the duty it is my opinion that American shoes could be sold here cheaper than they are now sold if the importers would be satisfied with a reasonable profit.

It would be best to establish here a regular American shoe store, which could make retail sales and sell large lots to dealers at other

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places. But it would perhaps be difficult to get the proper kind of a manager, and if an American manager were sent over he could not conduct business without permission from the Government. Most of the shoe stores here are small affairs.

LIST OF DEALERS.

Following is a list of dealers with whom correspondence might be opened:

Gothenburg.—Silvanders Herrekipering, 33 Södra Hamngatan; Bröderna Lindstrand, 24 Vestra Hamngatan; Engelska Skomagasinet, 22 Korsgatan; H. S. Fridman, 11 Allegatan; Kaesen's Skomagasin, 24 Vallgatan; Lanner's Skomagasin, 1 Linnegatan; Robert Löfquist & Co., 9 Södra Hamngatan; Prince of Wales Engelska Hatt & Skomagasin, 44 Östra Hamngatan; Svenska Sko- och Toffel-Magasinet, 42 Drottninggatan; Wallerius & Co., 25 Östra Hamngatan; Henry Törnsten & Co., Arkaden; G. Bauman, 24 Vestra Hamngatan.

City of Malmo.—Amerikansk Skoimport, A. H. Axelson; Frans Dahlberg, Skohandlare; A. Meisner, Skohandlare; Olsson's Nya, Beklädnadsmagasin; Wallin, Wallenberg & Co.; N. M. Lange.

City of Helsingborg.—Stenström & Hedbergs Herrekipering; Aktiebolaget M. Ljunggren; Alfr. Berg; Theodor Lindgren; C. A. Löfqvist & Co.; J. Rasmussen.

City of Halmstad.—S. P. Dahlström; E. O. Lindqvist; P. A. Carlsons Efterträdare; Sven Boman, Herrekipering; N. P. Lagerborg.

City of Lund.—Gust. Holmberg; Frithiof Elmqvist.

City of Landskrona.—Torsten Thyrén; P. Nilssons Efterträdare; Nya Skomagasinet; O. J. Rosander & Co.; J. Therkelson; Ph. Lindeberg.

City of Uddevalla.—Jacobowskys Handelsaktiebolag; Fredr. Friberg; Axel Bergman; Daniel Mattson & Co.; J. Zakrisson.

The above list includes firms which might sell foreign shoes, even if they are not actually doing so, because some of the firms selling men's clothing, etc., handle more foreign shoes than some of the regular shoe stores.

FRANCE.

IMITATION OF AMERICAN MAKES EXPOSED.

Consul Jackson, of La Rochelle, in a recent report announced the appearance in the markets of Belgium and France of imitation American shoes for men, which immediately became popular and displaced the genuine article. In consequence of the publication of that report a correspondence was opened with Consul Jackson, which has resulted in restoring the real American shoes at La Rochelle and vicinity and the displacement of the counterfeit makes, the prices of which have declined from 2 to 3 francs (39 to 58 cents) per pair. The consul writes:

Imitations of American shoes were all made on practically the same form and without great variety of widths. The idea became prevalent that while the American shoe was very comfortable it was far from being dressy. The public has been undeceived by the appearance of

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shoes directly from the United States in great variety of form and size, especially in the width. These shoes became at once popular, and my prediction in a previous report, to the effect that American shoes should find a splendid market here, is fast being realized.

There is, however, opportunity for ladies and children's shoes, of which nobody has, as yet, made any attempt to take advantage. The idea still exists generally that American shoes for ladies are heavy and clumsy, even if they are comfortable. Any business house in the United States having a traveler in Europe would do well to have him visit the largest cities in this consular district. These cities are Niort, Parthenay, Surgères, La Rochelle, Rochefort, Tonnay-Charente, Saintes, St. Jean d'Angély, Jonzac, Cognac, Jarnac, Angoulême, and Ruffec. I give the following addresses of dealers in foot wear in certain of these cities:

La Rochelle.—Cardineau, 9 R. des Merciers; Jeanpierre, H., 7 R. Hôtel de Ville; Nil, Melius, 18 R. Pas du Minage; Poindessous, 53 R. des Merciers; Richard, 51 R. du Minage.

Saintes.—Ascier, R. Alsace-Lorraine; Bonnet, Cours National; Georget, R. Alsace-Lorraine; Pasquier, R. Alsace-Lorraine; de Soria, Cours National; L'Incroyable, R. Alsace-Lorraine.

Rochefort.—Albin (Vve.), 29 R. Gambetta; Branger, 28 R. de l'Arsenal; Dufour, 50 R. Audry de Puyravault; Nil Melius, R. de la République; Vantenat, R. de la République; Mendès, 20 R. Lafayette; Tessier, 11 R. de l'Arsenal.

Cognac.—Abrard, R. d'Angoulème; Boucheron, R. d'Alger; Coteraud, R. St.-Martin; Dejean, Place d'Alger; Houdayer, R. d'Angoulème; Mandet, Av. Victor Hugo; Yvon, Ernest, Place d'Alger; Périn, R. d'Angoulème.

Angoulème.—Bocquiaud, Place Marengo; Bonnaud, 24 R. des Postes; Champagne, R. de Saintes; Charpentier, Pl. de l'Hôtel de Ville; Dumas fils, R. de Marengo; Lehmann, R. de Périgueux; Pinaud, R. St.-Martial; Rouyer frères, Pl. de l'Hôtel de Ville.

STYLES AND DEALERS AT ST. ETIENNE.

Consul Brunot furnishes the following report in regard to boots and shoes in St. Etienne and other points within his consular district:

There are over a hundred dealers in this city alone and many more in neighboring towns, some of them handling American shoes with success and others offering shoes made after the American method and style, so nearly copied that a nonexpert would find it difficult to discover any difference, but the price asked for the genuine imported article tells the tale to the buyer.

Imitation American shoes are generally marked "American style," with the word "American" very conspicuous. Wooden heels are in disrepute, and should not be used on shoes intended for the general trade. In high-top shoes very neat cut blacks sell best, followed by white or gray white for ladies. A very large trade is also done in ladies' low shoes at low price. The price between a neat low shoe and the high-cut shoe is a matter of consideration for the stylish but not very rich classes. Any advertising matter or correspondence sent to merchants in this part of France should be in French. No other language goes here.

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PRINCIPAL DEALERS.

Following is a list of the principal dealers in St. Etienne and other points in the vicinity:

St. Etienne.—Beaumont, Avenue Guner 1; Bernheim, rue du Général Foy, 8; Bocho, rue du Grand Moulin, 10; Bongrand, rue St.-Jacques, 28; Bonnet, rue St.-Jacques, 22; Boutheon, rue du Chambon, 10; Breuil, rue d'Annonay, 36; Cahard, rue Michelet, 19; Charvet & Jacquet, rue Traversière, 8; Chauve, rue de la Préfecture, 18; Clarisson, rue de la Paix, 1; Constantin, rue Gambetta, 3; Cordonnerie Générale, rue du Général Foy, 5; Corsin, Place du Peuple, 3; Dinsenmayer, rue de la République, 6; Dorrion & Maroteau, rue Gambetta, 6; Duchatel, rue Gambetta, 9; Florus, rue de la République, 1; Fouillade, Place Marengo, 7; Gontard, rue de la Comédie, 6; Jarrige, Place Hôtel de Ville 4; Magne, rue Gambetta, 17; Murat & Hiver, rue du Grand Moulin, 15; Regnier, rue de la Condition, 2; Raymond & Capel, Place Marengo, 2; Simian, rue Gambetta, 12; Verdelet, rue de la République, 20; Vincent, rue St.-Jacques, 29.

St. Chamond (Loire).—Alirand, rue de la République, 46; Anchichio, rue Alsace-Lorraine, 47; Leauzon, rue de la République, 50; Odin, avenue Alsace-Lorraine, 12; Grenier, rue de la République, 30.

Firminy (Loire).—Bernard, rue Nationale, 42; Fauvet, rue Nationale, 74; Vincendon, rue Nationale, 52; Vincendon, rue des Trois Ponts, 2.

TRADE IN NANTES.

Consul Goldschmidt, of Nantes, writes that very few American shoes are sold in that city. He explains that one of the principal reasons for this is that salesmen from America are seldom if ever seen there. Only one store displays American shoes for men, and these were limited to two or three kinds. He has not seen any American-made shoes for women. The consul says:

In many stores you see shoes displayed with the legend "American shoes," but upon examination they are found to be the most ordinary shapeless products of European manufacture. American shoes with many people consequently means inferior quality. All this could easily be remedied, and I believe a good business could be established if regular agencies for certain kinds of American shoes were established, where real American shoes could be sold upon their merits. The tariff upon shoes is not excessive, and would in my opinion be no hindrance to their introduction and sale.

For boots and high shoes (men or women), the duty under the general tariff is 2.50 francs per pair and under the minimum tariff 2 francs per pair, which is equivalent to 49 and 37 cents, respectively, American money. For low shoes (Oxfords), the duty under the general tariff is 1 franc and under the minimum 0.75 franc, which is equivalent to 20 cents and 15 cents, respectively.

Following is a list of shoe dealers in Nantes: Belle Jardinière, 12 rue du Calvaire; Biset Alfred, 2 rue du Calvaire; Incroyable, 1 rue Crebillon; Delumeau-Boucaud, 1 rue du Calvaire; Ducros, 8 rue de la Poissonnerie; Farrette Milliat, 20 rue Contrescarpe; Hobé Louis, 25 rue de la Poissonnerie; Jubin J., 7 rue Racine; Laubadère, 23 rue Crebillon; Lacour J., 1 rue Voltaire; Martin François, 4 rue du Cal-

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vaire; Perrouin frères, 10 rue Voltaire; Pigé Georges, 22 rue du Calvaire; Chaussures Raoul, 16 rue du Calvaire; Supiot Prosper, 24 Haute Grande Rue; Tessier Charles, rue de Feltre; Gander, 9 rue Boileau.

DEALERS IN BORDEAUX.

Consul Murphy, of Bordeaux, furnishes the following list of houses that sell American shoes:

Société des Chaussures Raoul, 7 Cours de l'Intendance; Les Nouvelles Galaries, 50 Rue Ste. Catherine; Vve Moustié, 224 Route de Toulouse; La Madrilone, 29 Cours de l'Intendance.

The consul says that in all probability American shoes would meet with ready sale if the business were properly handled and American methods of advertising introduced. American shoes are superior to those manufactured here as regards comfort, durability, and style.

GERMANY.

FAVORABLE OPPORTUNITY—LIST OF DEALERS.

Consul-General Guenther sends a list of dealers in Frankfort who are interested in American shoes, and also a list of those who might be induced to handle the American product. Those interested are as follows:

Adolf Barthmann, Rossmarkt 19; S. Schleedorn, Goethestrasse 13; Carl Schreiber, Goethestrasse 18; Conr. Tack & Co., Fahrgasse 107; Hein. Buettner, Hohenzollernstrasse 22.

Those who might be induced to handle American shoes follow :

R. Altschueler, Schnurgasse 33–35; Max Bier, Hasengasse 12; K. Drissler, Gr. Friedbergerstrasse 37; Alfred Fraenkel, am Salzhaus 4; Franke's, Schuhbazar Schnurgasse 49; B. Goldschmidt, Fahrgasse 104; J. Gruenebaum, Gr. Friedbergerstrasse 7; W. Leinberger, Weissadlergasse 16; F. Mettig, Gr. Gallussstrasse 10; Mueller's Schuhwaarenhaus, Zeil 41; Schuhwaarenhaus Hartmann Liebfrauenburg 54; J. Speier, Gr. Friedbergerstrasse 22; L. Spier, Fahrgasse 111; Alfred Stein & Co., Steinweg 12; Ullmann & Kapp, Gr. Friedbergerstrasse 32; Diebold Nachf., Fahrgasse 21; Albert Doss, Liebfrauenstrasse 7; Leopold Oestreicher & Co., Gr. Friedbergerstrasse 55; Jacob Handl, Zeil 15.

KIEL.

Consul Britain, of Kiel, reports that during the past years American shoes have been introduced into Germany to some extent, many dealers having added American shoes to their stock, yet these German dealers are not so energetic in recommending such shoes, and are more likely to persuade the buyer to take the German-made shoe. The American shoe is very superior as to quality, style, and price. If the American shoe manufacturers would establish their own stores in the various German cities, as they do in England, selling solely the product of their own factories, a great trade could be established. The American shoe selling at from $3 to $4 per pair is far superior to the German shoe selling at the same price.

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BRUNSWICK.

Consul Albert, of Brunswick, in forwarding a list of shoe dealers in that city, writes:

I take pleasure in inclosing a list of shoe dealers in this city. American shoes have never been introduced into Brunswick, and I believe there is a favorable opportunity to do this. There are shoes sold here to a small extent having the American form, but are manufactured in Germany. American machinery has been introduced and is employed in the manufacture of shoes in this country. The prices for men's shoes vary from $2.50 to $4.76. Double soles have not been worn much and are coming more in vogue. They cost about 50 cents per pair more than single soles of the same quality of shoe. In introducing American goods it would be advantageous to correspond in German and to have the price lists and catalogues published in that language. Active, enterprising young men as traveling salesmen with full command of German would be helpful.

Following is a list of dealers in Brunswick: Ed. Bartels, Damm 11; Max Bartels, Steinweg 35; Carl Edmund Goldmann, Steinweg 42; Fr. Meyer Nachf., Friedrich-Wilhelmstr. 24; Th. Riccius, Damm 18; Ernst Schubert, Damm 17; Gustav Schuckardt, Sack 6; Theodor Werner, Friedrich-Wilhelmstr. 19; Conr. Tack & Co., Damm 12.

AUSTRIA.

DEALERS AT PRAGUE.

Consul Ledoux, of Prague, furnishes a list of dealers in Prague to whom may be addressed inquiries in regard to extending their lines of shoes of all kinds, including rubbers, and to whom catalogues and prices may be sent:

Adolf Diamant, 33 Ferdinandstrasse; Heinrich Diamant, 35 Graben; Franz & Ernst Kompert, 6 Obstgasse; J. Novak, 11 Wassergasse; S. Stransky, 11 Hibernergasse; Alfred Bergmann, 6 Poritscherstrasse; Max Lüftschitz, 17 Wenzelsplatz; Leopold Goldschmidt, Bergmanngasse.

The consul adds that Messrs. Adolf Diamant and Leopold Goldschmidt have been the pioneers in the introduction of American shoes in Prague, advertising them extensively and devoting special departments to these lines.

SWITZERLAND.

DEALERS IN BASEL AND GENEVA.

Consul Gifford, of Basel, writes that most of the dealers at that place are manufacturers on a small scale and could hardly be induced to handle American goods. He furnishes a list of dealers of whom the first two are importing American shoes:

Ad. Fässy, 38 Freiestrasse; Andreas Gessler, 7 Rheinweg; Ad. Bachthaler, 35 Gerbergasse; Cafader & Co., 14 Reichensteinerstrasse;

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C. Deiss, 5 Hutgasse; Rich. Günther-Heiz, 23 Imbergässlein; Gysin & Co., 41 Elisabethenstrasse; J. Hilberg-Brugger, 78 Claragraben; L. Hort, 164 Güterstrasse; E. Jutzler, 95 Johannsring; M. Kohler-Baumberger, 8 Spalenberg; J. Langin, 52 Rheingasse; Alb. Lumpert, 34 Eisengasse; Oskar Rudin-Rudin, 8 W. Rheingasse; Hch. Stingelin-Zürcher, 88 Freiestrasse.

POPULAR AT GENEVA.

Consul Keene, of Geneva, writes as follows:

American shoes are now very popular in Geneva, where they can be seen in quite a number of shop windows. Their sale is increasing, as they are found good in quality and comfortable in shape. Moreover, the duty which in 1901 was increased from $11.55 to $25.09 per 220 pounds gross weight, according to the new customs tariff, from January 1, 1906, will be reduced to $15.44 per 220 pounds, in conformity with the conventional or minimum tariff.

The following Geneva wholesale houses can be communicated with, but correspondence should be conducted in French:

Dupont & Co., J. Monge & Co., Rinderknecht, Chamay & Burdet.

Transportation charges from New York to Geneva amount to about $5.79 per 220 pounds.

SPAIN.

DEALERS IN SEVILLE.

Consul Bartleman, of Seville, writes that owing to the high tariff rates it is doubtful whether American shoes would find ready sale in that market. The duty on boots and shoes per kilo is 11.35 pesetas, a peseta being equal to 15 cents United States currency at present rates of exchange. The prices that prevail are: For men's ordinary, $1.05 to $1.50, and women's, 75 cents to $1.05; medium-class men's, $1.87 to $2.62; women's, $1.05 to $1.87; best-class men's, $2.62 to $3.75; women's, $1.87 to $3; extra-class men's, $3.75 to $6; women's, $3 to $4.50.

Following is a list of the dealers in Seville: Adolfo Castilla, Plaza del Salvador, 17; Francisco Garcia, Plaza del Salvador, 3; Plácido Gómez, San Luis, 22; Hijos de Bovis, San Luis, 138; Hijos de Francisco Chico, Sierpes, 33; Antonio Ocaña, Plaza del Salvador, 9; Manuel Gil Gutierrez, Plaza del Salvador, 5.

ITALY.

DEALERS IN FLORENCE.

Consul Quay, of Florence, furnishes the following list of dealers in that city who might be induced to handle American shoes:

Anglo-American Supply Stores, 43 Via Cavour; Capineri Egisto, 10 Via Rondinelli; Chiostri Giovanni, 13 Via Porta Rossa; Lisciarelli Arturo, 6 Via Cerretani; Liserani Luigi, 9 Via Martelli; Mommiani D.,

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3 Borgognissanti; Montelatici & Volpi, 3 Via Porta Rossa; Ploner, 5 Via Calzajoli; Unione Cooperativa di Consumo, Piazza Vittorio Emanuele; Unione Militare, Unione, Via Brunelleschi.

GREECE.

READY MARKET OFFERED.

Consul Horton writes as follows from Athens:

The long pointed French shoe is generally in use in this country, but most of the larger dealers have samples of so-called "American forms" in their windows and several have brought supplies of lasts from the United States. It is the custom here to have shoes made to order, but it is very difficult despite this fact to get a good fit. I believe that a stock of really good American shoes of graceful shapes and sufficiently comprehensive in sizes to fit any foot would find a ready market here. The ordinary price for a pair of shoes here is from $4 to $5 American money, good shoes bringing the latter sum readily. The duty on ready-made imported shoes is 12 drachmas the oke. According to the present rates of exchange there are 6 drachmas in a dollar. There are in 1 oke 2.85 pounds.

The following are leading Athenian shoe dealers: P. Zaphoras, Evanghelistria street; Zoiopoulos & Sons, Stadium street; P. Karamaouna, Aeolus street; K. Linardi, Stadium street; G. Perpinia, Stadium street; D. Petraki, Aeolus street; G. Strati, Stadium street; G. S. Triantaphilos, Mouson street; Franzi & Papadopoulos, Stadium street; K. Fostira, Stadium street; J. Tzamis, Stadium street; N. Georgatos, Stadium street; O. Apostolakes, Aeolus street; A. Vlassis, Aeolus street.

TURKEY.

EARNEST EFFORTS WOULD BE SUCCESSFUL.

Vice-Consul Ojalvo, of Trebizond, reports that very little business is done in foreign-made shoes, but he believes that if American manufacturers will take up seriously the matter of introducing their shoes into Turkey a fair trade would follow. The shoe business in Trebizond amounts to about $20,000 per annum, of which only about $600 represents the value of shoes imported. Mr. Ojalvo says:

There are several kinds of shoes manufactured (all by hand) in this country. They are named and known as three qualities—first, second, and third; the former run in price from $3 to $4; the second (men and women) from $3 to $2.50; and the third from $2 to 75 cents. This last grade is made from native material altogether, and is exported into the interior in large quantities. In my opinion American shoes ought to find a good sale in this market. Efforts are required on the part of the manufacturer to adapt sizes suitable for this country.

Correspondence may be opened with the following houses in Trebizond: Constin Cokinides, Ksinides Frères, Andon Papazian, and Vilisarides. Mr. Vilisarides's firm is reliable. A consignment to him would be valuable as an initial movement.

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DOMINION OF CANADA.

TRADE IN CHATHAM—NO AMERICAN MAKES SOLD.

Consul Ifft, of Chatham, Ontario, writes as follows regarding the trade in that city:

Chatham is a very prosperous city of 12,000 population, the center of a district comprising altogether some 40,000 people. There is a large proportion of very well-to-do people who want the best of everything and are willing to pay for the same. Among this "best" which they insist on having is the American shoe, and under present conditions they go to Detroit, 40 miles away, to get it. There are practically no American shoes on sale in this city, but it is nevertheless a fact that perhaps 90 per cent of the higher grade shoes worn here are of American make. This is especially true of women's and children's shoes; but it is quite the ordinary thing, too, to hear a man say, "I haven't worn a pair of Canadian shoes in years," and pointing to the shoes on his feet, "I bought those in Detroit." The American shoe costs no more than the Canadian shoe, and is superior in comfort, style, and finish. The duty on importations of American shoes into Canada is 25 per cent ad valorem. It does not seem to me that this ought to shut the American shoe out of this market. The people here would gladly pay the additional cost in order to get the better article. It would be cheaper than a trip to Detroit. I can attribute the fact that American shoes are not on sale here only to neglect of this market on the part of the American shoe manufacturers.

The Consul furnishes the following list of dealers in Chatham:

Wm. Somerville & Son, Alexander Hall, George Cowan, D. Turrill, Trudell & Tobey, Albert Side, and J. L. Campbell.

LONDON.

Consul Culver, of London, Ontario, incloses the names and addresses of the principal shoe dealers in his consular district, all of whom deal more or less in American shoes. This is especially true of London, which has a population of 40,000.

Wholesale and manufacturers.—Crown Shoe Company, 258 Dundas street; London Shoe Company, 326 Richmond street; F. Smith & Co., 360 Richmond street; Murray Shoe Company, 197 King street; Sterling Brothers, York street.

Retail.—H. Ashplant, 137 Dundas street; R. C. Brown, 199 Dundas street; Brown Brothers, 182 Dundas street; J. P. Cook & Co., 167 Dundas street; Rowland Hill, 189 Dundas street; Robert Lashbrook, 583 Richmond street; W. B. Lawson, 198 Dundas street; Pocock Brothers, 140 Dundas street; Slater Shoe Store, 171 Dundas street; Thorne Brothers, 141 Dundas street; William Morrison, 148 Dundas street; Robert Neill, 123 Dundas street; William Paxman, 290 Dundas street.

Woodstock.—Following are the dealers in Woodstock, whose population is 12,000: E. T. Guppey, W. D. Hobson, W. S. Hurst & Co., R. Neill, and J. J. Watt.

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Ingersoll.—Barraclough & Co., F. Bloor, Dunbar & Co., J. Lenihan, and J. Wilkinson.
Strothroy.—Endacott & Co. and F. J. Wright.
Park Hill.—D. Holmes and John Shields.
Ailsa Craig.—Edwin Chapman and Donald S. McDonald.
Glencoe.—John N. Sexsmith.

ORILLIA.

Consul Wakefield, of Orillia, sends a list of dealers in that city and other places within his consular district, as follows:

Orillia.—Boston Shoe Store, The Northway Company, C. Moore Company, Kane & Kane, Perry & Alport, J. F. Morris, Montgomery Company, J. O. Perry, J. J. Cashman, and E. Morrison.
Penetanguishene.—Charlebois Brothers, F. Bowman, and C. G. Grendon.
Huntsville.—E. Flaxman, J. E. Fisher, H. L. Heath, Mayhew Clothing House, and Hanna & Hutcheson.
Gravenhurst.—Homer & Co., McGuire & Aiken, J. Groves, and Yeats Brothers.
Sundridge.—J. A. Riddell, A. E. French, C. H. Wissler, and Joseph Edgar.
Bracebridge.—John Carruthers, W. A. Gillespie, Axler Brothers, and Fred Merrill.
Burks Falls.—J. N. Dodds, C. W. Coulter, and Walter Sharp Company.
Sudbury.—John McLeod, Robert Martin, D. Jacobs & Co., A. Silverman, H. Silverman, M. E. Frawley, H. Smellie Company, and E. Poitros.
North Bay.—New Ontario Trading Company, John Doogan, Begg & Co., Wallace & Sons, and Chamandy Brothers.
Midland.—J. B. Horrell & Son, Playfair Preston Company, A. A. Osborne & Co., F. Wilson, Midland Mercantile Company, G. C. Gendron, and M. Levine.

ST. THOMAS.

Consul Moorhead, of St. Thomas, Ontario, reports that about 10 per cent of the shoes sold there are of American makes, chiefly of the higher grade which retail at $4 or $5. He writes:

It is almost impossible for American firms to compete with the very cheap, low-grade Canadian shoe. On the other hand, the high-grade American shoe, on account of its superior shape and style, can be sold here to a considerable extent.

The chief detriment to an increase of the sales of American goods is that the American firms do not give as long a term of credit as do the local manufacturers. The usual Canadian terms are sixty days net, 1 per cent off in thirty days, 2 per cent off in ten days. Most American firms give only thirty days net or 2 per cent in 10 days.

The chief dealers in St. Thomas are Stephen B. Pocock, W. J. & J. A. McCance, C. M. McIntyre, Raven & McDonald, Fred. Sutherland, Thos. Henry, C. & F. Hirsch, and Meehan & Regan; and Christie & Caron in Aylmer.

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WINNIPEG.

Consul Shank, of Winnipeg, Manitoba, furnishes the following list of wholesale and largest retail dealers in that city:

Wholesale.—Ames Holden Co., Arthur Congdon, Galloway & Co., Kilgour-Rimer Co., H. G. Middleton & Co., Thomas Ryan & Co., and Winnipeg Commission Company.

Retail.—Balfour & Forlong, The Collin Company (Limited), Walter Devlin, Dodd & Co., Hardy Shoe Company, Hudson's Bay Company, Rannard & Chapman, Robinson & Co. (Limited), George Ryan, James Ryan & Son, Slater Shoe Company, Charles Wellband, William Wellband, and T. Eaton & Co.

The wholesale dealers of Winnipeg practically control the trade of the northwest.

STRATFORD.

Consul Seyfert writes that at least 20 per cent of all the shoes sold in Ontario, Canada, are American-made, and 75 per cent of the higher grade worn are American. One retailer sells only American shoes, while all the rest of the shoe men in the city have the American shoes in stock.

When one of the leading dealers was asked why he sells so many American-made shoes, his reply was:

"The people want them. They are more up-to-date in style and finish, and the demand is such that we must sell them or we are not up-to-date. Our Canadian manufacturers are too conservative in adopting new styles. Shoes are made over the same last for years by some of our factories, instead of giving us something new every year, like the Americans."

The following list of dealers in Stratford and adjoining towns comprise the leading shoe men in this consular district:

Stratford—J. D. McCrimmon, Fletcher Johnston, John Way, Knechtel & Co., W. S. Shore, McLean Bros., Woolway Bros.

St. Marys—R. F. Gill, A. H. Lofft & Co.

Mitchell—T. S. Ford & Co., Andrew Eickmeyer.

Listowel—Geo. Detweiller, J. S. Gee.

Gray—Bernice & Co., Wight & Thompson.

SOUTH AMERICA.

ARGENTINA.

PROGRESS OF THE NATIVE INDUSTRY—AMERICAN MAKES IMITATED.

Mr. H. T. Willis, staff correspondent of the New York Commercial, who has been in South America for several months investigating trade conditions, furnishes that journal with a letter from Buenos Aires, under date of November 15, which contains facts that will be interesting to those engaged in the exportation and manufacture of shoe leather. A large number of shoes are now made in Buenos Aires, the leather and machinery being imported from the United States. Many

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persons in this country will perhaps be surprised to learn that there is one concern in Buenos Aires which turns out daily 18,000 pairs of shoes. This, however, need not discourage manufacturers in the United States, as 20,000,000 pairs of shoes are estimated to be sold annually in that country. It is reasonably certain that the consumption will be increased as the rough native shoes, made of cloth and twine, are discarded. Manufacturers should especially note what Mr. Willis says regarding the exportation of shoes that are alleged to be inferior to similar grades made for home consumption. His letter follows:

We have made rapid strides in advancing our shoe and leather trade in this country. I find a very interesting condition of affairs, especially as there seems to be a very good ground for the belief that the United States is likely to do less export of boots and shoes to this country year by year, and may drop off altogether. While the home manufacturers may begrudge this statement, it is nevertheless true, and while they may lose the trade, we as a whole are to gain, but in quite a different direction. American shoes will be sold in great quantities in the Argentine market, but they will be shoes manufactured in the country by American shoe machinery, and for a time at least with American leather, so that those two items will perhaps more than make up for the loss in the manufactured article.

IMITATIONS BY LOCAL MAKERS.

Some criticisms as to the quality of American-made shoes have been recently made to the effect that those manufactured for the export trade were distinctly inferior to the same marks at home, and certain American residents here were so well satisfied of this that they sent orders direct to their individual shoemakers and had shoes of exactly the same trade-mark sent to them, which were far superior to the goods on sale in the stores here. I have discovered that this is largely due to the fact that some of the small local manufacturers here were turning out an inferior article, using the name of an American shoe, but in one or two other instances I learned that there was a distinct inferiority in the shoe exported to the one sold at home.

There is a very large Italian element in this country, and many of them are shoe workers. These people buy the small machines for making certain parts of the shoes. One native concern has 1,000 pairs a day made outside by this method. The largest factory here is one controlled by a Scotchman, who turns out daily 18,000 pairs of shoes. His factory occupies an entire square. This seems almost incredible to us in the North, but it is estimated that over 20,000,000 pairs of shoes are sold annually in this country, and this will be increased as the "alpargatas" or native shoes, made of cloth and braided twine for the soles, are gradually abandoned. These latter are manufactured at a cost of about $4 gold per dozen, and are used a great deal in the country by the poorer classes.

LEATHER AND SHOE MACHINERY.

With the advent of American shoe-making machinery, cheap shoes are being turned out and are gradually driving out the alpargatas.

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There is considerable competition by the French manufacturers, who are imitating some of the American machines where the patents have run out or do not hold good in this country, and are offering them at much lower prices than the American. The full set as required to establish a really up-to-date factory costs in the vicinity of $35,000 gold, but the small machines vary from $22 to $2,500. Goods are all sold for cash. This means delivered here, the man seeing the goods before he pays, or he does not have to pay cash against documents in New York or Boston. If a special order is sent, then the buyer, to establish his good faith, pays a deposit of 10 per cent on placing the order and the balance on arrival in Buenos Ayres.

Another strong point, and one worthy of being adopted by others, is that one company here has a stock of pieces for repairs and small sets constantly on hand, so that there is no delay in filling an order, and several months' time is saved in this way. Of course, this means tying up a certain amount of money, but the business warrants it. As the leather here is a very coarse grade and the kid is inferior, the importations are considerable from the United States, so that those two items are the most important in the shoemaking trade, so far as we are concerned.

PARCELS POST NEEDED.

Several merchants whom I have talked with are strong in their advocacy of an express parcel or parcels post delivery to this country. The business done by samples is very large and the delay in getting the parcels, either through the shipping agencies or post-office, is more than vexatious. It is a positive hindrance to trade.

There are one or two shipping companies who are in a desultory sort of way pretending to do the business, but the way they handle it is an outrage to up-to-date business methods. There are one or two instances to mention. A man in Pittsburg sends to the express forwarding company a case of samples, which are to go forward by first boat sailing to Buenos Ayres. The express company receives the package and holds it until it gets enough samples together to make a "group" shipment, and in some cases six weeks have gone by before the goods were actually shipped. Then they arrive too late for an order for that season, or too late if they were parts to plows or implements for the harvest, and the things are virtually valueless.

VENEZUELA.

Vice-Consul Phelps, of La Guaira, writes that the high duty imposed by the Venezuelan Government on shoes absolutely prohibits importation. The duty is protective and is imposed for the benefit of the home industry. He believes, however, that dealers in shoe materials might find a market at La Guaira, as leathers are now largely imported from the United States. He furnishes the names of two manufacturing firms, J. Boccardo & Co., and M. Trujillo & Co., the former of which is the largest and most responsible firm in Venezuela.

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CENTRAL AMERICA.

COSTA RICA.

REPRESSIVE TARIFF RATES.

Vice-Consul Caldwell, of San Jose, writes that the sale of boots and shoes in Costa Rica is small. He says:

An almost prohibitive tariff is levied on imported shoes. A large portion of the poorer classes here wear no shoes. Among the foreigners and the wealthier Costa Ricans imported shoes are worn to a considerable extent. The value of shoes imported in the years 1903 and 1904 was, in round numbers: 1903, $9,000; from United States, $7,800; 1904, $6,000; from United States, $4,200. I know of no special reason for this falling off.

I presume most of the dry goods dealers in this city import a few American shoes, but a great many of the wealthier people order by catalogue direct, the shoes being sent by parcels post. Below is a list of dealers in San Jose who handle shoes, and may place small orders for American shoes:

A. Herrero & Co., Herrero Hermanos, José Esquivel, Robert Hermanos, W. Steinwerth & Hno, Juan Knöhr, hijos, Zapatería Española, Manuel Romero, Quelquejeu & Co., Leiva & Mora, Rodolfo Romani, A. André & Co., Artavía Zapatería.

In Turrialba: Gomez y Calleja and J. Alfaro.

For dealers in Puntarenas write to American consular agent; for Limon district, to consul at Limon. Also, A. M. Smith, manager Corinthian Mine, Esparta; Allen M. Yonge, superintendent Mina "Tres Amigos," care of Agustin, Guido, Puntarenas. These last order cheap shoes for their commissaries.

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EUROPE.

THE UNITED KINGDOM.

RESULTS OF LAST YEAR'S FOREIGN TRADE.

REMARKABLE RECORD FOR THE PAST YEAR—DECLINE IN IMPORTS FROM THE UNITED STATES.

Consul-General Wynne, of London, reports a remarkable increase in British trade in 1904, nearly a hundred millions more than in 1903, the actual figures being $93,000,000, of which the increase in imports was $41,000,000, the exports $52,000,000. Just what the causes for the increase were does not appear. It is fair to assume that a large part of it is the legitimate normal growth based upon the healthy expansion of British trade. Armed with a wonderful working class, aided by cheap coal and iron, and a not very expensive labor, it is only natural that the Empire should succeed in increasing its sales to a world wanting every class of goods produced by her machines and people. The consul-general writes:

The total value of imports into and exports from the United Kingdom in 1904 amounted to $4,487,175,742, an increase over the aggregate of the previous year of nearly $93,000,000, of which imports were responsible for $41,000,000 and exports for $52,000,000. Imports rose from $2,640,564,306 in 1903 to $2,681,629,483 in 1904; exports of British and Irish origin increased from $1,416,178,725 in 1903 to $1,463,410,476 in 1904, a rise of over $47,000,000; of foreign and colonial produce exports increased by some $4,000,000, viz, from $338,679,749 to $342,135,783.

COUNTRIES INTERESTED.

The countries which most noticeably increased the value of their imports into the United Kingdom in 1904 were—

Russia	$2,000,000
France	8,000,000
Egypt	6,000,000
Philippines	1,500,000
Argentina	19,000,000
Chile	4,000,000
Peru	3,500,000

Increased activity in imports from British colonies and possessions is shown in the following figures:

Australia	$30,000,000
British India	20,000,000
Straits Settlements	2,000,000

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On the other hand, the most marked decreases occurred in imports from—

Portugal	$2,500,000
Austria-Hungary	3,500,000
Roumania	5,000,000
United States	10,000,000
Brazil	2,500,000
Canada	20,000,000
New Zealand	3,500,000

INCREASES IN FOREIGN AND COLONIAL GOODS.

With regard to exports of British foreign and colonial merchandise, Great Britain increased her trade principally with—

Sweden and Norway	$2,000,000
Germany	10,000,000
Belgium	3,500,000
Italy	4,000,000
Turkey	10,000,000
Egypt	10,000,000
Siam	1,500,000
China (not Hongkong nor Macao)	10,000,000
Philippines	4,000,000
Porto Rico and Cuba	2,500,000
Argentina	15,000,000

To her colonies and possessions, the chief increases in exports were—

Australia	$9,000,000
British India	30,000,000
Hongkong	8,000,000

Decreases in exports occurred principally to—

Russia	$5,000,000
Holland	5,000,000
France	7,000,000
United States	11,000,000
Canada	2,500,000
Natal	10,000,000

The total exports of British, foreign, and colonial produce amounted to $1,805,546,059 in 1904, showing an excess of imports over exports of $876,083,424, or over 48 per cent of her total exports.

DISPARITY IN IMPORTS AND EXPORTS EXPLAINED.

This conspicuous disparity between the value of merchandise imported into and exported from the United Kingdom is not transient, proof being afforded by the fact that during the period covered by the fifteen years 1890–1904 the total imports amounted to $34,187,958,124, and the total exports to $23,177,827,092, or an excess of $11,010,131,032 of imports over exports, a percentage of 47½ per cent.

The articles of imports chiefly responsible for the increase in the aggregate for 1904 were: Butter; caoutchouc; motor cars and parts; raw cocoa; wheat; raw cotton; hemp; hops; unwrought and old copper; steel, unwrought; silver ore; tin in blocks, ingots, bars, or slabs; petroleum; flax or linseed; silk or satin broadstuffs; beet root and cane sugar; woolen stuffs. It is worthy of note, however, that several of the articles named are not, and never can be, produced in Great Britain, and the importation of raw materials not domestically obtainable is not a weak sign; this, nevertheless, does not apply to butter, silk and satin broadstuffs, and woolen stuffs.

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Decreases are principally apparent in the imports of bacon, cheese, oats, maize, wheat meal, and flour, unenumerated cotton manufactures, fresh apples, copper regulus and precipitate, iron ore, fresh mutton, cotton seeds, manufactures of silk other than broadstuffs, wine, and fir wood, most of which can be and apparently have been domestically produced or manufactured to a greater extent than in preceding years.

CONSPICUOUS GROWTHS.

In exports of British and Irish produce the most conspicuous growth occurred in ammunition, gray cotton yarn, cotton manufactures (which increased by nearly $45,000,000), hardware, tanned unwrought leather, boots and shoes, machinery and millwork (other than steam engines), tinned plates and sheets, sheep and lambs' wool, woolen and worsted manufactures. On the other hand, decreases were most pronounced in apparel (not waterproofed), coal and culm, pig and puddled iron, railroad rails, wrought iron manufactures, copper ingots and slabs, and haberdashery. In exports of foreign and colonial merchandise there occurred little worth noting, the total value being almost stationary.

IMPORTS AND EXPORTS.

In the annexed table the value of imports from and exports to the several countries named is given:

Country.	Imports.	Exports.
Russia	$152,821,911	$74,385,216
Sweden and Norway	74,710,114	43,130,801
Denmark	78,359,448	19,618,068
Germany	165,200,053	177,276,132
German possessions in West Africa	426,689	628,963
Holland	168,817,228	72,834,974
Holland, Java, and other Indian Ocean possessions	16,604,599	16,934,147
Belgium	134,006,012	65,573,616
France	248,712,439	105,714,753
Algeria	2,985,675	2,243,510
Possessions in Senegambia	3,472,239	3,610,300
French Indo-China	789,098	634,727
West India Islands	413	353,072
Portugal	13,937,724	13,020,710
Azores and Madeira	664,574	1,245,605
West African possessions	324,254	2,260,367
East African possessions	428,850	8,899,134
Spain	66,536,296	23,910,418
Canary Islands	7,507,826	4,674,219
Italy	16,180,246	44,982,752
Austria-Hungary	8,842,693	12,494,510
Greece	6,150,491	7,592,046
Bulgaria	1,396,816	2,837,884
Roumania	15,264,103	5,607,103
Turkey	28,002,074	36,918,675
Egypt	69,602,090	41,032,498
Tripoli	1,059,321	628,579
Tunis	1,994,246	1,718,124
Morocco	2,457,996	4,539,348
Kongo Free State	59,984	599,601
Persia	1,355,913	2,216,204
Siam	497,834	3,037,382
China	13,440,499	43,263,051
Japan	11,433,829	24,545,039
Philippines and Ladrones	11,377,357	7,465,931
Other islands in Pacific	1,316,466	468,657
United States	580,322,098	191,219,295
Cuba and Porto Rico	874,794	12,619,026
Mexico	2,896,544	10,102,426
Central American States	6,240,867	4,968,927
Haiti and Santo Domingo	327,763	1,524,572
Colombia	3,260,691	4,752,667

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Country.	Imports.	Exports.
Venezuela	$833,310	$3,530,725
Ecuador	771,695	1,654,462
Brazil	30,355,990	30,329,427
Uruguay	2,879,296	6,866,359
Argentina	112,100,810	56,327,343
Chile	26,390,752	17,189,826
Peru	11,541,840	6,264,032
Western coast of Africa	530,315	448,645
Other foreign countries	1,276,195	3,447,525
Total foreign countries	2,097,559,910	1,217,753,086
British possessions.		
Channel Islands	7,719,451	6,428,228
Gibraltar	142,674	5,048,483
Malta and Gozo	233,779	6,195,069
Canada	100,085,894	59,606,556
Newfoundland and Labrador	2,513,634	2,713,565
Bermudas	22,235	1,212,987
British West India Islands	9,224,040	11,357,753
British Guiana	2,374,238	3,109,178
British Honduras	844,712	482,765
Australia	114,698,149	96,657,345
New Zealand	62,006,558	33,567,294
British India	177,494,083	202,176,281
Straits Settlements	30,580,210	15,490,670
Ceylon	21,123,108	7,134,984
Hongkong	2,271,735	22,263,108
Mauritius and dependencies	1,287,452	2,299,309
Aden and dependencies	669,961	1,592,362
Eastern coast of Africa, under British influence	954,011	1,594,883
Natal	2,550,070	29,040,784
Cape of Good Hope	24,018,824	63,691,238
Niger protectorate	6,958,129	4,877,254
Lagos	1,571,490	2,591,352
Gold Coast	2,553,282	5,038,448
Sierra Leone and Gambia	874,210	2,264,805
Cyprus	811,934	658,466
Other possessions	1,498,920	859,117
Total British possessions	584,069,573	587,792,884
Total Foriegn countries and British possessions	2,681,629,483	1,805,546,059

TRADE WITH THE UNITED STATES.

The decline in the value of goods imported into the United Kingdom from the United States, which began in 1902, has steadily continued. The value in 1901, $686,251,750, fell to $580,322,098 in 1904—a decrease of nearly $106,000,000. Compared with 1903 there has been a further loss of nearly $15,000,000. The articles principally responsible for this decrease were cheese, which totaled in 1904 only $2,449,367, as against over $6,000,000 in 1901 and $8,000,000 in 1900; wheat, which in 1902 amounted to $70,000,000 and in 1904 to but $12,251,048; wheat meal and flour, the value in 1902 reaching $35,000,000, compared with $19,931,962; raw apples, lard, bacon, fresh beef, flax or linseed, sawn or split wood, and maize. The last named has fluctuated considerably since 1900, when the value was over $40,000,000; in 1902 it totaled some $2,500,000; in 1903, $22,000,000, and in 1904, $9,519,540. It will be observed that the decreases occurred chiefly in food stuffs. Boots and shoes, however, also declined in 1904, the value in the latter year having amounted to $1,780,214, compared with $2,300,000 in 1903.

In contrast to these decreases, it is worthy of remark that gains were made in imports of oxen and bulls, raw cotton, hops, copper (unwrought and part wrought), steel ingots, blooms, etc., old metal, and unmanufactured tobacco.

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DECREASED SALES TO THE UNITED STATES.

As regards exports from Great Britain to the United States, although the total of British and Irish produce in 1904 decreased by nearly $11,000,000, compared with 1903, it was greater than in 1900 or 1901. Exports of foreign and colonial merchandise remained practically the same in value in 1904 as in the three preceding years, the total reaching in those periods about $93,000,000, but showed an increase over 1900 of some $7,500,000. The increases in certain articles of British produce were most conspicuous in exports of potatoes, telegraph cables and apparatus, and sheep and lambs' wool. On the other hand, decreases were most marked in coal and coke, cottons, iron (wrought and unwrought), and floor cloth.

TRANSIT AND COLONIAL TRADE.

Foreign and colonial merchandise exported to the United States in 1904 increased principally in raw coffee, unmanufactured cork, dressed and undressed hemp, tin, and sheep and lambs' wool, while decreases worth noting occurred in china ware, raw cotton, jute manufactures, plumbago, and furniture woods. A remarkable decrease in the exports of tomatoes from the United States to Great Britain since 1900 is worthy of mention. In that year 50,891 hundredweight, of the value of $200,000, were exported. In 1901 this dropped to 591 hundredweight; in 1902 to 1 hundredweight; in 1903 it rose to 431 hundredweight, only to again drop, in 1904, to 15 hundredweight. As tomatoes are a favorite vegetable and consumed in great quantity throughout the United Kingdom, this practically total loss of exports of the vegetable from the United States would seem to require explanation. Is it due to the low price tomatoes sell at in England, or want of proper transport facilities, or—and this is more probable—the increase in the home production and of the imports from Europe?

FOOD AND RAW MATERIALS.

Of the imports into Great Britain, cotton leads with $195,819,878, followed by oxen and bulls, $34,826,610, and bacon, $30,216,143. In short, foods and the raw materials of commerce make up about three-fourths of all the commodities that go into Great Britain from the United States. When an item in the millions is disclosed it is pretty sure to be followed by a word indicating food or some raw material. Wheat, worth $12,251,048, was imported; maize, $9,519,000; wheat meal and flour, $19,931,962; barley, $5,938,526; fish, $4,261,603; apples, green, $4,281,886; preserved fruits, $2,088,380; lard, $14,803,114; leather, $17,144,489; fresh beef, $24,966,536; preserved meats, other than salted, $5,548,136; unwrought copper, $13,779,188; steel ingots, $5,448,379; machines of various kinds, $6,658,116; sewing machines, $1,016,441; agricultural machines, $1,426,020; steam engines, $1,183,270; lamp oils, principally petroleum, $8,640,463; lubricating oils, $4,521,627; oil-seed cake, $3,767,327; paraffin, $4,970,049; rosin, $2,523,747; certain furs, not seal, $2,757,707; soap, $1,618,914; tobacco, manufactured, $5,793,070; not manufactured, $11,759,869; wood, hewn, $4,458,341; sawed or split wood, $9,392,097; staves, etc., $607,962; mahogany, $488,221; unenumerated woods, $2,616,775; furniture, $1,487,324; other manufactures of wood, $2,244,133.

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The merchandise bought by the United States consisted largely of manufactured articles. This is not unnatural. Great Britain is not a land that lends itself to many of the raw products of commerce, though it has several that are very useful in its own industries, including coal, iron, tin, and other minerals. Curious as it may seem, Great Britain sent the United States cotton goods aggregating nearly $15,000,000. Its exports of cotton goods to all parts of the world went up to $403,919,500, including yarns worth $43,579,983.

GREAT REVIVAL IN BRITISH TRADE.

According to the latest returns for the ten months ending October, 1905, British trade shows marked improvement, due in great measure to a recovery since the close of the South African and Russo-Japanese wars. The total exports during the ten months have increased by over $150,000,000 compared with the figures for the same period in 1904. Imports have also increased, but only to the extent of $54,000,000, so that the increase in exports over imports is nearly as 3 to 1. While the growth in imports has occurred principally in raw materials, the rise in exports has been far greater in manufactured articles, chiefly in cotton and woolen fabrics, iron and steel manufactures, machinery, and miscellaneous manufactures. The increase in imports has been due in the main to raw cotton, oil seeds, nuts, oils, fats and gums, hides, and in miscellaneous manufactured articles.

Exports of solely British and Irish produce have accounted for nearly $125,000,000 of the total increase, articles of foreign and colonial origin being responsible for the balance, the chief increase in the latter being in raw material and manufactured articles.

The countries which have principally benefited by the increase of imports into the United Kingdom in 1905 are Russia, Germany, France, Egypt, Argentina, the Straits Settlements, Australia, and Canada, while Great Britain has chiefly gained in her exports to Germany, Netherlands, China, islands in the Pacific (value nearly doubled), United States, Philippines, Argentina, British India, and Canada.

CONSTANTLY GROWING MARKET FOR FOOD PRODUCTS.

The following report of British agricultural imports, by Consul Mahin, of Nottingham, suggests matter for thought to American farmers, dairymen, cattle raisers, and merchants. The fact that Great Britain imports $900,000,000 worth of farm products every year is sure to set people who provide food to thinking how best to enter that market. Mr. Mahin writes:

Analysis of the total amount paid for agricultural products imported into Great Britain during the farm year ended August 31, 1905, gives results which are gratifying to an expert correspondent of the Nottingham Guardian. The total value of such imports was about $900,000,000—an increase of about $6,000,000 over the corresponding preceding year. Previous increases had been much larger. This increase is accounted for by an unusually large augmentation of imported wool and hides; so that, in fact, there was an actual decrease of about $10,000,000 in the value of imported food products. This decreased value was due to decrease in both quantities and unit values in certain cases.

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DECREASE IN CEREALS.

It appears from the grain and flour figures that the imports of wheat increased by 12,000,000 hundredweight (1 hundredweight is 112 pounds), or about 12 per cent, while the flour imports decreased by 8,000,000 hundredweight, or nearly 50 per cent. Barley decreased about 8 per cent and corn about 10, while oats increased about 15. The net decrease in the total quantity of these articles was 2,430,205 hundredweight, or about 1 per cent. In values, wheat and oats imports each increased nearly 20 per cent, while flour declined about 40 per cent, barley about 30, and corn about 6. The net decrease in the total value of these articles was under 1 per cent. The difference between the percentage decrease in quantity of barley imports and in the value thereof—respectively 8 and 30 per cent—would seem to indicate a great decline in the price of that cereal. But the contrary was the case. The price of barley has risen about 15 per cent this year in comparison with last. Barley merchants thus explain to me the wide divergence in these percentage decreases. In the year ending August 31, 1904, the imports were mainly of the very best grade, and therefore highest-priced, barleys, because the local crop was of poor quality. But in the year ending August 31, 1905, the imports were of cheap grades, because the home product was of exceptionally fine quality.

MEATS AND DAIRY PRODUCTS.

Of dead meat imports, quantity increased 1,041,143 hundredweight, or 6 per cent, while value increased $3,000,000, or 15 per cent. The quantity increase was chiefly in fresh beef, which, with bacon, had a slightly lower value this year than last, but this was more than made up by the increased value of some other meats. Imports of dairy products decreased in both quantity and value. The value of butter declined $2,800,000, but its total still exceeded $100,000,000. A 10 per cent increase in margarine imports is considered significant in this connection. Imports of live animals also declined in total quantity and value, especially of sheep. Cattle, however, increased slightly in quantity, but declined in value. There was a great decrease in imports of apples, potatoes, and some minor products, and a small decrease in imports of eggs. On the whole this comparison of agricultural imports gives the expert quoted more satisfaction than any other he has made for several years.

THE POSTAL SERVICE.

EFFICIENCY AND METHODS OF OPERATION.

Consul Mahin, after briefly referring to the profits and losses of the postal systems of the principal countries, furnishes the following statement regarding the operations of the British post-office:

According to a paragraph afloat in the English press, an analysis of the results of postal services in different countries in 1903, said to be "just published by the International Postal Bureau," shows the United States with the heaviest deficit and Great Britain with the largest profit. The respective losses in that year were, roundly: The United

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States, $4,239,000; Argentine Republic, $895,000; Mexico, $242,000; Luxembourg, $31,000; Crete, $5,300.

Profits: Great Britain, $22,000,000; Russia, $14,650,000; Germany, $14,275,000; France, $14,100,000; Spain, $3,000,000; Hungary, $2,800,000; Belgium, $2,400,000; Japan, $2,250,000.

No mention is made of countries not included in these statistics. The most suggestive feature of the foregoing figures is the contrast between those for the United States and Great Britain. The British postal receipts in 1903 were approximately $70,000,000—about one-half those of the United States—nearly one-third of which was profit. The figures for 1904 (not covered by the statistics above quoted) afford a still more striking comparison, for Great Britain's postal expenses increased less than its receipts, thus enhancing its profits nearly $3,000,000 over those of the preceding year, while the reverse was the case in the United States, where the deficit was doubled.

EXPEDITIOUS DELIVERY OF LETTERS.

Just what makes this great difference between the two countries does not appear on the surface. The average Briton does not observe any skimping in the home postal administration. He is not conscious of being misserved in any respect. Indeed, if he happens to be familiar with the postal service of other countries he is inclined to think himself exceptionally well treated. Taking this city as a fair sample of the whole Kingdom, the postman makes his rounds six times daily and once on Sunday. A "drop" letter posted in any street box, say at 8 a. m., for any address in the town, will be delivered at 10 a. m.; posted by 10, delivered at 12 noon; posted by 2 p. m., delivered at 4; posted by 4, delivered at 6 p. m.; posted by 7, delivered at 9 p. m. Mails hence to London are so frequent that letters posted here at almost any time up to 1.30 p. m. are delivered in that city from four to seven hours later the same day. This is true generally as to mail for Liverpool and other important English cities. There is also a rural delivery—daily except to very distant farmhouses, which are served triweekly.

RATES AND WEIGHTS.

Rates of postage cause no complaint excepting when the recipient of matter wholly or insufficiently prepaid must pay double the deficiency. A letter up to 4 ounces in weight is carried for a penny (2 cents), with a halfpenny for each additional 2 ounces. A duly registered newspaper goes for a halfpenny, regardless of weight. A halfpenny carries 2 ounces of other printed matter, drawings, photographs, etc., and written matter not in the nature of a letter, such as press manuscript, bills, receipts, insurance policies, deeds, and legal documents generally. These and other mailable things are also carried by parcel post—threepence (6 cents) for 1 pound or less, the rate increasing by a penny per pound up to 11 pounds, the limit, carried for a shilling (24 cents). Any mailable thing may be registered for 2 pence (4 cents) in addition to the postage, and the Government will give compensation for loss or damage up to £5 ($24.33). Greater compensation up to the limit of £120 ($583.98) is guaranteed, £10 for each penny paid by the sender above the first twopence. Thus, for 1s.2d. (28 cents) the Government assumes liability for £120.

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SPECIAL-MESSENGER SERVICE.

Without charge for ordinary postage, "express delivery" letters or packets are carried by special messenger from the office where posted at 3d. (6 cents) for each mile, but where the article is very heavy or the distance great, requiring a special conveyance (cab or the like), the cost thereof is added. Mail for express delivery from the office of destination must in addition pay the ordinary postage. Petitions and addresses not exceeding 2 pounds in weight may be sent to the King or to Parliament free of postage. Not only letters but "halfpenny packets" and newspapers may be forwarded without additional postage if reposted not later than the day after delivery.

Money orders cost 2d. (4 cents) for £1 ($4.86), 3d. for £3, 4d. for £10, and so on up to 10d. for £40, the limit for one order. Postal orders payable to bearer cost ½d. for 6d. up to 1½d. for 21s. ($5.11), the limit.

EXPENDITURES RELATIVELY SMALL.

The Briton seems well satisfied with these various conveniences and charges, for whatever just or unjust complaints may be made against other British public institutions, the post-office goes virtually unscathed.

Whatever economies, therefore, may cause the profit of the postal establishment, they do not detrimentally affect the average citizen. Though detailed statistics are not at hand or locally obtainable, sufficient data are available to indicate that various items of British postal expenditure are relatively small. For instance, the compactness and dense population of the Kingdom reduce the cost of transporting the mails to the minimum. Officials (except the heads of the system) and employees being all chosen upon a strictly classified basis and being entirely aloof from partisan politics, there are, apparently, no wasteful sinecure posts. Salaries are not unnecessarily large. The highest paid postmasters receive £1,000 ($4,866) a year. In this city (250,000 population) the postmaster receives £750 ($3,650). Postmasters' salaries in neighboring towns with from 3,000 to 30,000 population range from $700 to $2,000 each. The clerks in the Nottingham office receive from $300 to $1,500 a year; in the smaller cities of the district, from $250 to $900. Mail carriers in Nottingham are paid about $400 a year; in the smaller cities, and rural carriers, from $275 to $350. Offices corresponding to the fourth class in the United States are attached as suboffices to Nottingham and the smaller cities referred to. Subpostmasters are paid by commissions, which range from $40 to $700 a year, and must provide all help and appliances, except official forms, at their own expense.

NO SECOND-CLASS MATTER.

The British post-office gives no special cheap rate corresponding to the American second class. All periodicals must pay the regular postage rate, publishers and news agents being given no preference. A rate substantially equivalent to that of our second class is obtained from the railways, and through them the provincial dealers receive their supplies of London newspapers, magazines, and other periodicals. If a subscriber receives a periodical direct from the publisher, he must, as a rule, pay the postage thereon in addition to its price, but from the newsdealer he gets it for the net price.

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MISCELLANY.

NEW AND VALUABLE DEVICE IN LACE-MAKING.

Consul Mahin, of Nottingham, reports that Charles Hickton, residing near that city, according to a local newspaper, has invented a device for lace making which, it is claimed, will be both a labor saver and an economizer of bobbin cotton. It is claimed that by means of this device it is expected to work all the brass bobbins off equal in length and practically empty, and to get about thirty single racks more off each same length of winding—that is to say, in fining goods, brass bobbins with 95 yards of cotton with the present-day method run about thirty single racks, but with Mr. Hickton's invention the same length of winding would run about sixty single racks, nearly double the number of racks with the same length of cotton. The waste at present is tremendous. In a breadth of about sixty carriages frequently half a dozen bobbins are emptied while the others are three parts full, yet the latter have to be taken off and the cotton stripped and thrown to waste. Instead of this, by Mr. Hickton's scheme, it is all made into racks. The same results will be attained with beam goods. The bobbins will run about thirty racks farther, and will be practically empty when off, which will dispense with all jacking off. It will be seen by a practical mind that where bobbins can be worked off equal a better face of work should be attained. Much labor will be saved in winding, threading, and pressing, to say nothing of the time the machine itself will gain, if this invention realizes all that is claimed for it. The principle, which is exceedingly simple, has been protected, and patent rights will be secured.

It should be explained that a rack is a varying quantity of lace and is determined by so many motions of the machine. A rack is usually the width of the machine, and may be from 4 to 80 inches in length—the shorter for very fine and the longer for very coarse fabrics. Roughly, the average rack may be placed at about 40 inches long and about 200 inches wide.

AMERICAN AGRICULTURAL IMPLEMENTS.

Consul Hamm, of Hull, sends a letter, printed in the Yorkshire Post, which will interest manufacturers of agricultural machinery and suggest to them the methods best adapted to place their product favorably before the British public. The letter follows:

In the Yorkshire Post of November 30, reference was made to Mr. Brassey's candidature for Grantham, and the following words were used: "As is well known, the town is largely interested in the manufacture of agricultural machinery, for which it once had a good and lucrative market in the United States. Now, thanks to prohibitory tariffs in America, British agricultural implements are practically excluded from the American market, though the Americans are able to flood this country with agricultural implements of American manufacture at prices to which none but the manufacturers object."

Is it the case that English agricultural implements have no show in America because of the import duties? Let me state a fact: A few weeks before harvest time, in the Bentham district, on the weekly

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market day, there were exhibited in the streets three different American reaping machines, and one by an English maker. Each of the American machines was in charge of an American expert, who clearly and ably explained the peculiar merits of his particular machine. Each vigorously and adroitly canvassed for orders, etc. No specialist was in attendance with the English machine. Was it because its merits—engineeringly or economically—were in no need of pushing? By no means. The reason for the popularity of American reaping and binding machines is simply that they are, on the whole, better and cheaper. And who reaps the benefit? Not a particular firm or firms, but the whole arable agricultural community, and, indirectly, the public generally.

WOOD FOR WEAVERS' SHUTTLES.

In reply to inquiries Consul-General Bradley, of Manchester, furnishes information in regard to the importation into England of persimmon wood used in the manufacture of shuttles, and furnishes the names and addresses of shuttle and shuttle-tongue makers in the Manchester district. Mr. Bradley says that persimmon wood and cornell (dogwood) are the two chief woods used in the manufacture of shuttles in that section, and that there is a large market in Lancashire for the sale of persimmon wood. Following is a list of shuttle and shuttle tongue makers with whom parties in this country may open correspondence:

Blackburn.—John Brown; Brown, Pickering & Co.; Thomas Dawson; Kirk & Co.; Henry Livesey (Limited).
Bolton.—Joseph T. Simpson.
Hebden Bridge.—James Harwood & Sons.
Macclesfield.—T. Johnson & Son.
Oldham.—John Woodstock & Son.
Rochdale.—Lewis Heap; William Holt & Sons (Limited); Smith & Co.; John Taylor.
Todmorden.—John Crossley & Son; Greenwood & Hargreaves; Wilson Brothers Bobbin Company (Limited).

LARGELY DECREASED BIRTH RATE.

England's birth rate is declining. It touched its highest point, since registration began in 1838, in 1876. To-day it is at its lowest. The children of the most prolific mothers—those of 1876—are the most unproductive mothers. The reason assigned for the frightful decline is "the decay of the maternal instinct." Only 75 per cent as many little ones see the light now, or remain in it, as saw it thirty years ago. No one factor, however, can account for the entire falling off.

The fact is there are many causes. Notably among the most prominent is the advanced age at which persons marry and the fact that a great many never marry. Previous to 1876 the marriage rate was 16 to 17½ per 1,000. To-day it is 15½. The claim made for years by leading economists that population was supposed to vary with the food supply is being doubted. It fails to hold good in England, for at no time in the past was food so cheap or so abundant as it is to-day.

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Possibly, says one writer, "rent, the rates, and taxes have more to do with the question than has the price of wheat." The fact of the matter is, the question is beyond the best men in the Empire. It baffles everybody from the humblest to the highest. In the fight for first place that is on, it means, or may mean, a great deal to England whether her birth rate is small or large. A short crop of little ones in 1905 and in each succeeding year means a short crop of men for the army, navy, mills, shops, farms, ships, factories, and colonies of England twenty-five or thirty years hence.

SCOTLAND.

WHY FOREIGN COMMERCIAL TRAVELERS FAIL.

Consul Fleming, of Edinburgh, explains the reasons for the numerous failures of foreign commercial travelers to effect satisfactory trade results in Scotland. He thinks it is due to unwarranted carelessness in ignoring certain fundamental rules that obtain with Scottish merchants. He writes:

It has been my observation that the average commercial traveler on his first trip to Scotland makes a bad start. It is within bounds to say that six out of every ten American sales agents who have come to this country have not sold enough goods in three months to cover the amount of their expenses for that period. The principal cause for their failure is the false assumption that quality of goods and fairness of prices and of general terms are sure to bring success. After a time—in some instances a long time—they discover that the foremost requirement is the exercise of prudent caution in taking the initial step toward getting in touch with business concerns.

In large as well as small Scottish firms and joint stock companies the management, as a rule, is in the hands of one person. As to companies (including cooperative and all other societies engaged in business) division of authority is even less frequently seen here than in the United States. Each has a single head, and subordinates have nothing to do with the affairs of the company except to obey the instructions of their chief. Take the case of a department store. The so-called head of a department is merely the principal salesman in that branch of the business. He does not purchase for the firm or company nor is he authorized to act or speak for the firm or company in matters outside of his duty as principal salesman. These facts are supposed by the heads of concerns to be universally known in trade circles, and if a commercial traveler calls on the head of a department or invites him by letter to see goods in a hotel sample room, instead of going directly to the general manager, upon his subsequent introduction to the latter he finds himself handicapped by his mistake—a mistake which he may regard as trivial, but which may create a prejudice against him that will be hard to overcome.

LOCAL CUSTOMS ARE EXACTING.

In the Scottish business world customs, which are unwritten laws, differ from those of America and of some other countries, and it is highly important that a sales agent take care to learn the difference.

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If he does not, he might better stay at home. Experienced traveling salesmen, American, German, French, and Russian, give close attention to the personal element in business. A few instances have come under my notice. A German commercial traveler in the hardware trade when he first visited Edinburgh devoted several days to what he considered the essential work of gaining an accurate knowledge of the men having charge of the concerns on the list which he brought with him. A Russian sales agent in the fur trade once informed me that he spent almost as much time in acquainting himself with the personnel of firms in the cities and towns of Scotland as in afterwards placing his goods before the authorized buyers for the various houses. An American representative of an American company manufacturing a well-known machine told me that his capital mistake when he came to Scotland was in muddling his business from the start by not taking time to obtain full information as to the names, positions, and characteristics of the managers of firms and companies. Three or four months' experience gave him useful lessons, and thereafter he was remarkably successful.

ADVICE TO AGENTS.

To call for the "manager" or "managing director" of a company is a mistake. His name should always be given. It is a mistake to enter the business house of Jones, Smith & Co. and inquire for "Mr. Jones" or "Mr. Smith." There may not have been a Jones or Smith connected with the establishment for half a century. To go into any store without exact knowledge of the name and post of the man with whom the traveling salesman is to deal is a mistake. To lay one's business before a subordinate in the absence of his chief is in most cases a great mistake.

These elementary matters are often overlooked by many foreign salesmen, and always to their disadvantage. It is my opinion, gained from conversations with many sales agents of different countries, that in no country is it less difficult to sell goods than in Scotland if one goes about it in the right way, which here is the customary way. But if a sales agent does not conform tactfully to custom the probability is that his sojourn in Scotland will be expensive rather than profitable to his employers.

REMOVAL OF SLUM PROPERTIES IN EDINBURGH.

Since 1893 the corporation of Edinburgh has carried out various improvements in the unhealthy areas of the city, acquiring slum properties, demolishing the old houses if not capable of being made fit for human habitation, and building tenements to be let at low rentals. The market value has been paid for all slum properties taken either by agreement with the owners or compulsorily, under the housing of the working classes act. The law requires that where more than ten houses (the term "house," as used here, meaning a flat or separate division of a flat) occupied by persons of the laboring classes are scheduled for demolition, new houses shall be provided for the persons so displaced unless the secretary for Scotland is satisfied that ample accommodation is otherwise available within a reasonable radius. In twelve years 1,608 houses have been demolished and 662 erected. Of these new houses, 289 are of one apartment, 36 of one apartment

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and bed closet, 329 of two apartments and bed closet, and 8 others not recorded. The cost of the erection of each house has ranged from £100 ($486.65) to £190 ($924.63). Tenants of one-apartment houses pay 60 cents a week rent, of two-apartment houses $1 a week. The financial aspect of the housing scheme is altogether unfavorable. There has been a loss, which has had to be met out of the rates or taxes.

The net amount of capital expended for dwelling-house improvement down to May 15, 1905, was $826,555, and the valuation of the property, as appearing in the city's books, is $465,262, leaving a deficiency of $361,293. The principal cause of this deficiency, it is said, has been the large prices which the corporation has had to pay for the sites. These, with cost of clearance, have varied from $9.73 to $23.84 per square yard. The expense of managing and repairing the houses has been remarkably heavy, no less than 40 per cent of the rents collected. The improvement scheme committee of the town council, while justly claiming that the clearances have had a salutary effect on the health of the city, have considered the advisability of the corporation getting rid of all holdings of this class of property, stringent terms to be laid down as to the sanitary condition in which they must be kept, so as to prevent their relapsing into a slum condition a few years hence. It is now stated by the committee, in a report to the town council, that "the emergency which compelled the corporation to provide the houses has passed away, considerable difficulty having been experienced in getting them fully let, and there seems no reason why the corporation should continue to be encumbered with such property." In short, the municipal effort in Edinburgh to solve the housing problem has been a costly experiment from first to last, both in providing and managing the tenements.

BONELESS MEAT.

This part of Scotland has long been an important market for American chilled beef in quarters. From a comparatively recent date boneless meat, chilled or frozen, shipped in boxes, has been coming from the United States to Scotland, and of late the sales have increased steadily, the weekly consumption in this city at present being estimated at 14,500 pounds, at prices ranging from 6 to 9 cents per pound wholesale. At a recent meeting of the Edinburgh Dairymen's Association complaint was made by members that this competition was having a serious effect on the prices received for their fat cows; that the boneless meat was not inspected by the local authorities, while the carcasses of cows were subject to a rigorous inspection at the slaughterhouses, and therefore the competition was unfair; that the meat "must be of the very lowest grades to be sold boneless at the prices quoted." It was resolved by the dairymen to approach the board of agriculture and the local government board with reference to the matter, and to obtain if possible their assistance in securing legislation prohibiting the importation of this class of meat, and also to call the attention of every public-health department in the country to "this low-grade meat."

STRINGENT INSPECTION LAWS.

It is doubtful if any other country has a pure-food law more severe than that of Scotland, and it is also doubtful if the laws for the pro-

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tection of the public health are more rigidly enforced in any community than in Edinburgh, as some of the east Scotland dairymen whose fat cows have been condemned at the Edinburgh slaughterhouses can testify. I have made inquiry of the chief sanitary inspector of this city in regard to the boneless meat sold in the local market. He says that of course the sanitary laws apply to this product, as to all other food products, and that, although somewhat difficult to inspect—the entire contents of a package requiring to be pulled to pieces—it has been subjected to a careful and thorough examination from time to time and in every instance found to be sound and wholesome. It is not probable that the alleged grievance of the dairymen will result in any serious effort to place restrictions on the importation of boneless meat.

COOPERATIVE FARMING.

The Scottish Chamber of Agriculture is promoting cooperation among farmers. In England, agricultural cooperation has been carried on for some years. Under the guidance of the Agricultural Organization Society, associations for supplying farmers' requirements and for marketing their produce have been formed in many places, and now number 130, with a large membership. Up to the present time no society has been organized in Scotland for agricultural supply and distribution. At a convention of farmers held in Edinburgh last week, under the auspices of the Chamber of Agriculture, those present formed themselves into the "Scottish Agricultural Organization Society," the object being to bring about cooperative effort on the lines pursued by farmers in Denmark and other countries on the Continent.

This project receives encouragement from the cooperative union—the central administrative body of the cooperative societies of the United Kingdom—for the obvious reason that the organization of agricultural societies will tend to develop cooperative trading and greatly benefit the cooperative wholesale societies. The general position of the cooperative movement in the United Kingdom is shown by the statistics for 1904: Number of members of societies, 2,205,942; sales, $447,154,448; profits, $50,332,739. These figures include none of the English agricultural societies. It is clear that the growth of cooperative farming, in close connection with the general movement, may lead to a steady development of British agriculture and to an enormous increase in the business of the cooperative wholesale and retail societies.

SHETLAND PONIES.

In response to inquiries from the United States about Shetland ponies, Consul Higgins, of Dundee, furnishes information that will interest those contemplating investments in those animals. The facts presented by Consul Higgins were obtained from Consular Agent Murray, of Aberdeen, in whose district the Shetland Islands are included. It appears that the breeding of Shetland ponies is quite general in Great Britain. Through the persistency of Mr. R. W. R. Mackenzie, of Earlshall, in Fifeshire, what might be called headquarters for the breeding and sale of ponies has been established at that place, and for three years the most extensive pony sales of Scotland and northern England have been held there.

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An analysis of the sales shows that mature ponies of good form bring high prices, ranging from $200 to $500. For inferior grades the prices are proportionately lower. For foals prices are almost nominal, even when the blood is of acknowledged merit. It would seem that the annual sales at Earlshall could be profitably used by Americans who wish to establish in this country a herd of Shetlands. Many of the ponies exhibited at the sales are models of beauty, and their performances in the ring show fine trotting action and good speed for their size.

Mr. Mackenzie, in a letter to Consular Agent Murray, states that the price of ponies ranges from £3 ($14.60) to £100 ($486.65) each. The latter price would be for a very superior stallion. Orkney and Shetland are adjacent islands lying northeast of Scotland. They are sterile, treeless, and windswept, but the climate is comparatively mild owing to the influence of the Gulf Stream. To Consul Higgins, Mr. Mackenzie writes:

It seems to me the lesson to be derived from the Earlshall sales is that there is still a demand for ponies of the highest merit and best blood, whilst for the general-utility pony or commoner the market is diminishing. This is partly due to the fact that many of the thin coal seams in the Durham district, where these ponies were very largely used in recent times, have now ceased to be worked, and larger ponies are employed where the works are high enough to admit them. While this is so, my increasing average encourages me to go on breeding the best. Experiments I have made in crossing the pure Shetlander with some of our larger breeds convinces me that there is a future for the breed in this direction. Horsemen generally are more and more realizing the value of pony blood for crossing purposes, and where can we get it purer, sounder, or more robust in constitution than in the Shetland? The intelligence of the Shetland pony is proverbial. Absolutely the best animal I ever sat behind in harness was a thickset, 14-hand cob whose dam was a Clydesdale mare and sire a pure Shetland pony.

IRELAND.

SCHOOLS FOR INSTRUCTION IN RAISING POULTRY.

Consul Knabenshue, of Belfast, responding to inquiries, furnishes the following report on a system of poultry raising recently established in Ireland:

The department of agriculture and technical instruction for Ireland, which was organized under act of Parliament, entered upon its duties four years ago. Among the many objects within its purview is poultry raising. An annual appropriation of public money is made to each county for poultry improvement. According to the last general report of the department, there were employed during the year ending September 30, 1904, 30 instructresses in poultry keeping. The objects aimed at are, first, to improve existing breeds of poultry by infusion of pure-bred stock; second, to develop the industry on the two lines of egg production and rearing fowls for table use.

To promote instruction in the best methods of hatching and rearing, the department recommended to the county committees the appointment of an official whose duty it is to stimulate popular interest. Of

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the thirty-three administrative counties in Ireland, only one failed to adopt the recommendation. In each of the thirty-two counties meetings have been held and poultry keepers have been advised and assisted in procuring eggs of pure breeds from the department's egg-distributing centers. The amounts appropriated that year by the government for poultry work ranged from $3,475 in County Cork and $2,186 in County Antrim to $778 in County Carlow, the lowest. During the year there were 3,165 meetings held in the interests of poultry improvement. The 392 egg-distributing stations sent out 10,357 dozen of chicken eggs for hatching. The selection of breeds was left to the county committees, but the department's regulations require a selection from the following:

Laying breeds: Minorcas, White or Brown Leghorns.

General-purpose breeds: Houdans, Plymouth Rocks, Orpingtons, and Faverolles.

The choice of the county committees mainly fell on the Buff Orpington and White Leghorn. The instructors in poultry work are allowed $9.75 per week, in addition to second-class railway fare, jaunting-car hire where necessary, or bicycle allowance of 4 cents per mile in lieu thereof. Their duties are to lecture upon the selection of breeds, the hatching, rearing, feeding, and housing of chickens, and marketing the product; to visit poultry runs, and give such practical advice as may be needed; to inspect the egg-distributing stations, and to report upon the work of the department. All the lectures are under the supervision of the county committees as to the places and local arrangements. The lectures are given in rural localities and on evenings from early autumn until the close of the hatching season. There is no charge for the eggs distributed for hatching, but those receiving them must agree to keep one pure breed of hens only; to dispose of all fowls of other breeds; to keep no male birds except of the selected breed. In case a premium is competed for on hens alone, to keep not less than 30 nor more than 60, and to feed and care for the birds, under instruction.

WALES.

DEPRESSION OF THE SLATE INDUSTRY.

Consul Williams, of Cardiff, furnishes the following report on the slate industry of Wales:

The depression in the slate industry of Wales, which has continued for many months, is becoming severe. Stocks amounting to thousands of tons have accumulated at Port Penrhyn and Port Madoc, and many of the slaters have gone elsewhere to seek steadier employment. The men had been anticipating a reduction of wages, and when the manager of the Penrhyn quarries announced a reduction of 10 per cent, to take effect January 1, 1906, no one was surprised. The loss in wages will amount to about $100,000, and will affect fully 4,000 men, or nearly one-third of the slaters in the United Kingdom. The number in the Kingdom in 1904 was 12,265, but the great majority were employed in Carnarvon, Merioneth, and Denbigh shires in North Wales. The town most affected will be Bangor.

The slate output of Wales for 1904 amounted to 427,730 tons, valued at $6,991,072.77. Three-fifths of this output was mined in open quarries in Carnarvonshire, and nearly two-fifths from mines in Merioneth-

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shire. The largest quarries are the Penrhyn, near Bangor, where the reduction has been announced, and the Dinorwic, near Carnarvon. The largest slate mine, which had an output of 49,192 tons in 1904, is near Festiniog. Most of the slate finds a market in Great Britain, as the exports amounted to only 29,357 tons, of which 25,181 tons were exported from the port of Carnarvon. The total output of slates in the United Kingdom in 1904 was 563,170 tons. This was an increase over 1903, but it was more than 100,000 tons short of the output in 1898, when the high-water mark was reached. The industry has never recovered from the effect of the strike of several years ago. French slate then entered the British market, and it has retained a hold to this day. This combined competition, with the present depression in the building trade, accounts for the dull market for the Welsh slate. The cost of production is, perhaps, another element to be considered, for the French slaters receive lower wages than the Welsh.

MALTA.

CAMERAS FORBIDDEN.

Consul Grout, of Valetta, reports that the local government of Malta recently passed very strict regulations against photographing or sketching of fortifications and other military works. The consul warns American visitors to exercise the greatest care in using cameras in Malta in order to avoid trouble. He also admonishes steamship companies touching at Malta to make the local regulations known to their passengers. He writes:

According to the ordinance the taking of sketches, photographs, making plans, surveys, or other representation of naval or military works, renders the guilty person liable to fine or imprisonment and confiscation of materials used. "Fortifications" includes any fort, battery, or other work of defense and any government dock or naval establishment, whether constructed or under construction. Under certain conditions a permit may be issued, but under certain restrictions. The most important article of the ordinance reads as follows:

Any person who, without the permission in writing of the officer empowered by the head of the government to grant such permission, or in contravention of the terms of the permission, or of the conditions upon which it is granted, makes, or attempts to make, a sketch of any fortification, and any person who, without the permission in writing of such authority, or in contravention of the terms of such permission or of the conditions upon which it is granted, shall make, sell, expose for sale, or transfer under any other title whatsoever, sketches of fortifications shall be liable to fine or detention or both.

In the ordinance photographing is included under the head of "sketching." By another article of the ordinance any person found in the vicinity of a fortification with photographing or sketching materials is liable. Arrests may be made by the civil police or by any naval or army officer in uniform not below the rank of a petty officer in the navy or sergeant in the army. Several times in years past American tourists have been found taking photographs in ignorance of the law and have had to deliver up their films. Now, however, arrest is ordered, and the military as well as the police have authority to execute the law.

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FRANCE.

INDUSTRIAL EXPANSION.

EXPLOITATION IN FOREIGN FIELDS—WORLD-WIDE INVESTMENTS.

According to the Revue de Commerce Exterieur, the year 1889 marks a characteristic stage in the work of French engineers. At that time France found itself face to face with many important facts. The exposition of that year showed to the world that France had fully recovered from the wounds of 1870–71. At that time the world was approaching an hour when the rules regulating its industrial and economic conditions were to be subjected to a tremendous change; many nations were about to give notice that they would be bound no longer by the trade treaties signed some years before than the day set for notice to be given of denunciation. France went forward in favor of tariffs so strongly protective that they resulted in retaliatory measures on the part of former excellent customers. Luckily new markets, rendered necessary to secure equilibrium, were found by French manufacturers and engineers.

INVESTIGATIONS AND INVESTMENTS.

In 1892 a vast enterprise was undertaken by the Government. It was backed up by the best men in the diplomatic and consular service. Its purpose was to find in what way French manufactured products could be sold in foreign places and to learn, if possible, how much French capital was invested in foreign enterprises. The result is presented here in a résumé. Thirty billion francs, nearly 6 billion dollars, were found to be invested abroad. Of that vast sum, 298 million francs were in foreign factories, 87 millions in mines and metallurgical works, 661 millions in canals, ports, etc., and 4,489 millions in railroads.

The report deals with the different countries in which French capital has been invested, giving some suggestive and interesting details. For example, Germany has little French capital in its mills. There are two plate or fine glass factories in Waldhof and Stollberg. England has several, but none of any very great importance, for the English people are enterprising, intelligent, and able to take advantage of any opportunity presented. There are several French firms that have furnished English ships with many almost indispensable requirements, particularly boilers of a particular kind. Others have furnished sugar-making mills, light-house equipments, etc. The exportation of automobiles to England went up from 3,000,000 francs in 1900 to 32,000,000 in 1905.

In Belgium the French have taken an active part. The fortifications of the Meuse, costing 50,000,000 francs; the walls of the quays at Antwerp, 12,000,000; the maritime canal for Bruges, 56,000,000; the great marine pool, or harbor at Antwerp, costing 7,000,000; innumerable tunnels, viaducts, etc., in different parts of Belgium are all down to the credit of France. In all the mines, forges, factories, and other important Belgian enterprises Frenchmen or French capital—often both—are found.

SPAIN AND ITALY.

The French money invested in Spain is put at 2,000,000,000 francs. Most of the Spanish railroads are the result of French loans, labor,

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and skill. In all parts of the Iberian peninsula, in Spain and Portugal, the French have left traces of their money and their labor. In no part of the world have French engineers and French investors done more than in Spain. Their shops and factories are far more numerous beyond the Pyrennes than in any other country.

All efforts to effectually place French capital in Italy in large quantities have failed. A break was made some years since that has never been very successfully patched up. Even now, after many years, although the relations between the two countries, at least outwardly, are friendly enough, the industrial and commercial interchange is far below what it ought to be. This accounts for the fact that the factories in Italy based on French capital are few.

RUSSIA, TURKEY, AND CHINA.

In spite of the most friendly relations between Russia and France the latter may not truthfully boast of very many successful sales or enterprises in Russia. In building public works for Russia this is practically true. The only places in which French skill and capital were taken into Russia are in the mines. There the French have had a firm and successful hand.

To Turkey the French have turned as to a land of promise, and to a certain extent it has been such. The ports, the quays, the railroads, the mines, tobacco raising, and many of the leading industrial and commercial enterprises of the Ottoman Empire owe their origin to French engineers or to French capital.

The French have been in the East for a long time. From Tonking and Hunan they have looked longingly toward Peking. When the Chinese gave indications of their purpose to break with the past, the French were on hand to help them with advice and money. Several valuable railroad and mining concessions have been secured by French capitalists, calling for 170,000,000 francs.

In Egypt the French were once practically supreme. They built the Suez Canal, furnished Egypt with ideas of progress and with the means of easy and cheap manufacture, and founded factories, constructed bridges and railroads. To-day, while they have large sums invested in Egypt, they have practically no influence apart from that which is inseparable from a machine or a piece of work.

SOUTH AMERICA AND MEXICO.

In South and Central America the French have found favor. On the pampas of Argentina, the pampas of Brazil, or the llanos of the Orinoco, in the cattle ranches and in the farms along the rivers, huge sums have been invested. Many of Argentina's and Brazil's factories and railroads are the result of French capital and the work of French engineers. The railroads of Brazil and the sugar mills have taken a large amount of French capital. At present most of the money is in lands, shops, and roads along the seacoast. As the interior opens up, as the rubber groves and forests of fine woods are exploited, France will be sure to secure a leading part among Brazil's industrial enterprises.

In Mexico France has invested 300,000,000 francs, of which 100,000,000 are in mines. It has helped to build sugar refineries, steel mills,

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tobacco shops, etc., one of these last said to be largest in the world. The author of the report, writing of course for Frenchmen, advises them to avoid resting on their laurels. He points to the powerful competition that is growing fiercer and fiercer with each year. He urges them to make themselves masters of the commercial and industrial facts that lead to success. He wants them to study the methods that have contributed not only to French success but to the success of others. No word of all this is without meaning to United States merchants and manufacturers, who will do well to read and heed what is said.

WAR ON WHITE LEAD.

LEGISLATION ASKED TO SUPPRESS MANUFACTURE.

Consul-General Mason, of Paris, furnishes a report on the agitation that has been in progress for some time in France against the use of white lead in preparing paint for industrial purposes. The consul-general writes:

After many years of more or less desultory agitation and discussion the protest against the use of white lead as a material for industrial painting has assumed in this country the form and proportions of a definite and insistent measure of reform. There was held recently in the great hall of the Trocadero in Paris a meeting of scientists, philanthropists, contractors, master and journeymen painters to the number of nearly 2,000, the purpose of which was to put into definite form some of the facts and statistics which show the extent and danger of lead poisoning among painters and workmen in the white-lead factories, and the effects of such exposure upon the health of the workingmen and their children. The president of the assemblage, Professor Dieulafoy, was assisted by some of the most eminent scientists and physicians of France, among whom were Doctor Brouardel, Professors Richelot, Chantemesse, and Vidal, and a large number of practicing physicians from Paris and the Departments. Among the vast assemblage were delegates from the syndicates of industrial painters in Paris, Lille, Bourges, Bordeaux, Nantes, and other cities, so that the proceedings assumed a distinctly national and representative character.

DISEASE CONVEYED TO WORKMEN.

In his opening address Professor Dieulafoy stated that it was a matter of common knowledge and experience among physicians whose practice is among people of the working class, that journeymen painters who use white lead for interior or exterior work on buildings, as well as the workmen employed in white-lead factories, are often afflicted with a long train of diseases resulting from saturnine poisoning. Among these maladies were cited saturnine colic, an intensely painful form of abdominal cramp; muscular and articular rheumatism, ending in muscular atrophy and paralysis; saturnine anemia and gout, which reduce the individual to a state of complete incapacity for labor, and finally saturnine nephritis, which disorganizes the kidneys and leads to uremia and its various epileptic, apoplectic, and delirious complications. This formidable arraignment was taken up and continued by Doctor Mosny, physician in chief at the Hospital St.

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Antoine, whose practice has brought him into contact with a great many cases of saturnine disease. Doctor Mosny read a letter from Professor Bertillon, the eminent criminologist, who confirmed from his own experience and observation the now generally acknowledged assertion that the manufacture and use for painting of white lead constitute two of the most unwholesome and dangerous occupations known to modern industry.

DEPLORABLE INFLUENCES.

But the most powerful and effective part of Doctor Mosny's report was that in which he described the congenital effects of lead poisoning, the deplorable influences which are transmitted through parents affected with saturnine weakness and disease to their children. The poison attacks the system, both through the lungs by inhalation in the form of fine particles of dust, and through the digestive organs when taken into the stomach with food or drink that has been contaminated by the touch of soiled hands or exposure in an atmosphere poisoned with the dust or fumes of lead. The arraignment having been completed and driven home by statistics and scientific testimony from which there could be no reasonable appeal, the meeting took up the question of a practical remedy. This was declared to be simply the abolition by law of the manufacture and use of white lead as a painting material and its replacement by zinc white, a substitute which is superior in whiteness, equally durable, harmless to human health, and only about 1 per cent more expensive to produce.

TO SUPPRESS MANUFACTURE.

To accomplish this reform there is now before the French Senate an act submitted to the Chamber of Deputies by Mr. J. L. Breton, and adopted with substantial unanimity. This proposition recognizes the vested rights of white-lead manufacturers and will allow them four years from the date of enactment of the proposed law in which to close up their business or convert their factories to the production of colors having a zinc base. After that white lead may no longer be manufactured in France. The measure is naturally opposed by powerful interests, which insist that the Government has no right to prohibit the manufacture of an industrial product which has been freely made and used for centuries without paying a liberal indemnity. To this the advocates of the law reply that Germany stopped certain manufacturers of phosphorus without paying indemnities, and that the public health should be the supreme and controlling consideration in national legislation.

From the readiness with which the proposition of Mr. Breton was adopted by the Chamber of Deputies, and the powerful testimony and influence which have been marshaled in its support by the conference herein described, it would seem more than probable that the coming winter will see the enactment of legislation which will formally place white lead on the list of prohibited materials in French industries.

MINES AND METALS.

MINING ACTIVITY AND RAILWAY CONSTRUCTION.

Consul Brunot, of St. Etienne, reports that great activity prevails in the coal mines of that place, which is indicative of activity in the

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various manufacturing industries. The metal industry, which has been dull for some time, gives indications of a revival. The consul writes:

The coal mines of St. Etienne and region are very active just now, working full time to meet the demands of the extensive foundries of the department. According to the statistics for 1904, the output of coal was 3,534,000 tons, exceeding by 5,000 tons that of the previous year, and representing a total value of $10,810,433, or an average of $3 per ton. The mines exported from the department nearly 2,000,000 tons and 75,000 tons of coke. The total number of miners of all categories was 18,934 and the wages increased 3 per cent.

An important reform as to the number of working hours in mines was voted at the close of the last session of the French Chambers. For several years the miners had been agitating for an eight-hour day and the Parliament finally gave them satisfaction, but in an indirect way. For instance, only a certain class (diggers or pitmen) will ultimately benefit by the new law. The Chamber provided for a gradual decrease in the number of working hours covering four years. For the next two years, beginning on January 6, the working day will be nine hours, after which it will be reduced to eight and a half hours for two years more. At the expiration of this second term eight hours will be the legal limit. Naturally there exists considerable discontent among the other classes of mine workers at seeing themselves excluded from the benefits of the reform, and it is possible that eventually the companies will be obliged to make it general.

The metallurgic industry, which has been very low for several years, is regaining some of its former activity. Considerable and very important orders have been received by the great steel works, both in St. Etienne and in the neighboring city of St. Chamond. These orders are both home and foreign, the latter coming chiefly from Russia and Japan. The first-named country has ordered from St. Chamond 75,000 projectiles, all nickle plated, while the same mills are completing several turrets for the Japanese marine. The French Government has also ordered turrets for its navy.

RAILWAY CONSTRUCTION.

The Orleans Railway Company has decided on the construction of a line of railway between St. Flour and Capdenac, in the Department of the Cantal, by which a more direct route for passengers and merchandise will be opened between Lyon and Toulouse and even to the central Pyrenees and passing through St. Etienne, le Puy, Brioude, St. Flour, etc. This railway, owing to the agreement recently arrived at between the French and Spanish Governments in reference to the construction of three tunnels under the Pyrenees, will in reality constitute the international line between Geneva and Madrid. It is also said that the same company is about to establish a connection between St. Flour and Brioude, and in that case the distance between St. Etienne and Toulouse will be diminished by close on 100 miles.

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VINTAGE.

FAIR RESULTS IN THE COGNAC DISTRICT.

Consul Jackson, of La Rochelle, has furnished a report on the grape crop and the outlook for wine making in what is known as the Cognac district of France. He writes:

The vintage in the Charentes or Cognac district this year has yielded a little more than fair results. The entire season, except the end, was very favorable to the development of the grapes, and the vines were covered with exceptionally luxuriant verdure. However, late in August and early in September rain fell in considerable quantities and on successive days. Instead of the hot, dry weather necessary to mature the grapes the air was cold and moist. The grapes attained full size, the average in the "champagne" districts being considerably more than a pound in weight for the bunches. When the vintage began, on September 20, the grapes were full size, but not so thoroughly ripe as to give the best results. Consequently the percentage of alcohol this year is lower in the wines than last year. The grape known as the "folle-blanche" was vintaged first, as the fruit began to rot. As the vintage progressed, however, the weather became drier, and the rot, which only affected a few raisins on each vine, dried, and consequently its unpleasant effects did not appear in the wine. The fruit of the St. Emilion, another vine, was not affected with rot at all and was gathered in most districts after the "folle-blanche." It may be said that the average alcoholic strength of the wines of the cognac region this year will be between 7 and 8 per cent while last year there was 9 per cent, due of course to the larger quantity of sugar in the grape.

The quantity of wine produced this year was supposed to have been about 700,000 hectoliters (185,000 gallons) less than last year. Since more complete returns have been received it is probable that the quantity of wine produced this year will equal that of last year, which was a little over 2,500,000 hectoliters (about 650,000 gallons). The quantity of brandy, however, produced from wine of this strength must be necessarily about one-eighth less. The distillation of these wines has already begun, and, although the wines do not present the same agreeable qualities to the taste as last year, it is at present impossible to say that the brandies produced from them will not be equally as fine as last year. The results in the "petite champagne" and "bon bois" districts have been astonishing to the distillers, as the new brandies have a splendid bouquet, and there is practically no taste from the rot that appeared late in the season. Of course it is a little early yet to judge generally, but it would appear that the brandy of 1905 will be almost equal to the very excellent product of 1904.

AMERICAN FURNITURE.

GOOD OPPORTUNITY FOR SALES IN FRANCE.

Consul Goldschmidt reports that there is an excellent opportunity at Nantes and other places in France for the sale of certain kinds of American house and office furniture. The consul describes the kind of furniture made and sold in France, and is confident that if American

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manufacturers would make a persistent effort furniture of the classes described by him would find a good market. Consul Goldschmidt writes:

Nearly all kinds of furniture are manufactured at Nantes, all being of good quality and excellent workmanship, yet there are two reasons why, in my opinion, certain kinds of American furniture might be sold here: First, the high cost of everything in that line; second, the lack of comfort to be derived in the use of furniture made here. The cost of furniture is high, because nearly everything is handmade. Labor in connection with its manufacture is slow, because everything is done by hand—sawing, planing, carving, etc.—and consequently comparatively small amounts are turned out. Another reason is the high prices of the woods entering into the manufacture.

The French cabinetmaker is an artist in his line, and will produce beautifully wrought work. However, he is hampered by tradition or demand, which require certain styles. Consequently he will reproduce, year after year, the same styles which his forefathers have made for centuries. Louis XV, Louis XVI, Empire, Renaissance, Henry II, and a few others are the styles in general demand.

The French manufacturer has never educated his purchasers into the line of "comfort" in furniture, and the demand consequently is generally for the above classic styles. For some few years past innovations have been made, and certain styles commonly called "Art Nouveau" have been made and placed on sale. Some of these are beautiful, others are monstrosities, and although for a few years there has been considerable selling of this "Art Nouveau" there is again a tendency to return to the old styles. One of the reasons for this is the lack of comfort in the use of such furniture. Taking these facts into consideration, I think an excellent market can be worked up here for certain kinds of American furniture.

DESIRABLE GRADES.

This, however, would require intelligent efforts on the part of our manufacturers or exporters, as it would be necessary to show the advantages which American furniture offers. Salesmen would have to be employed who could explain its merits to the trade, and displays of it would have to be made in show rooms in the larger centers. The cheaper grades of oak and ash furniture of all kinds would probably be sold to a certain class of customers—bedroom sets, chairs, armchairs, rockers, hall trees, etc. In dining-room furniture nearly everything to be found here is heavy, massive, and generally lacks the neatness and elegance of American dining-room furniture, while the prices are considerably higher. What I consider as particularly lacking here are the comfortable armchairs and rocking-chairs found in nearly every American home, and for these there is a good market here, if an intelligent effort be made to introduce them. One may find a few bentwood rockers of either Austrian or German make in the local stores, but they are far from being comfortable.

Office furniture of American make is already sold here to a certain extent, but much more of this could be sold if it was to be found generally in the local furniture stores. Outside of Paris very little office furniture is found on sale.

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RATTAN AND WILLOW FURNITURE.

An effort was made by the writer to procure a few pieces of rattan furniture, such as are commonly sold in the United States, but not a single piece could be found in any of the stores. There are a few cheap chairs of rattan or willow to be found of European make, but they are of the most common variety. The dealers here have not the slightest idea of the comfort and elegance of some of our rattan furniture, and there being none to be found in the stores there is no sale and very little demand for it. There is an exceptionally good market here for such furniture for use at the many summer residences, chateaux, and seaside resorts. Nearly everyone here, excepting the working classes, have some country or seaside residence where such furniture would be appreciated, and if placed on exhibition large quantities could be sold in Nantes as well as in other parts of France.

I spoke of this to a local dealer a few months ago and he seemed very much interested. He asked me for the names of some American manufacturers in this line, which I gave him. He wrote three letters to different concerns. Only one took the trouble to reply, and the nature of the reply was such that business relations seemed impossible. Many of the French merchants would ask nothing more than a fair opportunity to try American furniture, and if properly broached on this subject a profitable business could be worked up.

NAMES OF DEALERS.

The following are a few of the leading furniture concerns in Nantes: Bouvet, Melle, rue Affre; Breaud, A., rue Lafayette 1; Brochard, Place Bretagne 24; Brochard, Andre, Place Bretagne 20; Chabas, Ch., Carrefour Casserie; Charpentier, L., Place Bretagne; Decré frères, Haute Grande rue; Ferré, François, Ponte de l'Arche sèche 2; Frehel, Alphonse. Place Bretagne 6; Ganachaud, Alfred, rue Paré 17; Gravoille, Francis, rue du Calvaire 34; Guillemartel, rue Mercoeur 2; Henri-Leglas, Basse Grande rue 7; Josso, rue Mercoeur 5; Lacquement Armand, rue Mercoeur; Lanoe, A., rue Boileau 8; Leglas, Maurice François, Rue de Briord 9; Marx, rue du Calvaire 18; Parent, Place Bretagne 22; Roux frères, rue du Calvaire 20; Thomas, Charles, rue de Feltre 3; Verbruggé, rue Boileau 9· Wolkowitz, rue Boileau 12.

HOUSE RENT IN PARIS.

PRICES PAID FOR PLACES OF RESIDENCE.

An article which appeared in a recent issue of the London Daily Mail forwarded by Consul Liefeld of Frieburg contains some very interesting figures and facts in regard to the housing of the people of Paris, from which the following is taken:

The total rentable value of all property in Paris in 1791 was $5,255,820; in 1800 it amounted to $11,095,620; in 1850 to $32,702,880; in 1880, $112,902,800; while now it amounts to $166,434,300. Comparing the number of properties existing in 1865 with those of to-day, it will be found that the number of buildings in the center of the city

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has considerably decreased, while it has vastly increased in the suburbs. There has been a decrease of 526 buildings in the Louvre quarter, 283 in the Bourse, 207 in the Temple, 254 in the Hôtel-de-Ville, 233 in the Panthéon, and 109 in the Luxembourg quarter. At Reuilly and at Batignolles the number of ratable properties has about doubled. Rentable value has quintupled at Passy, quadrupled at Batignolles, tripled in the Elysée quarter and the Buttes-Chaumont.

SUBDIVISION OF PREMISES.

The density of the population of Paris is astounding. In 1878 there were 254 inhabitants per hectare (2½ acres); to-day there are 322 per 2½ acres. It is curious to note the subdivision of habitable premises by their rentable value. There are 697,708 apartments or lodgings of a lower rental value than £20 ($97.33), giving a total of $33,092,200; 114,798 having a rental value of £20 ($97.33) to £40 ($194.66), total, $10,900,960; 30,947 of a value of £40 ($194.66) to £60 ($291.99), total, $6,618,440; 17,680 of a value of £60 ($291.99) to £80 ($389.32), total, $5,645,140; 11,529 of a value of £80 ($389.32) to £100 ($486.65), total, $4,866,500; 16,197 of a value of £100 ($486.65) to £120 ($583.98), total, $9,538,340, and finally, 17,020 apartments of a value of £160 ($778.64) or over, totaling $24,527,160. Thus Parisians pay their landlords yearly £19,560,000, equal to $95,188,740.

THE WATER SUPPLY.

The following extracts from a letter sent by Consul-General Mason, of Paris, to parties making inquiry, may be found as interesting to others as to the parties for whom they were written. Mr. Mason writes:

The maximum amount of water supplied to the city of Paris in one day was, on July 19, 1901, 400,385 cubic yards of spring water and 753,158 cubic yards of water derived from artesian wells and the rivers. This was an aggregate of 233,772,800 gallons.

The average daily water supply from all sources in 1901 (for which year I have the complete statistics) was 687,594 cubic meters, or about 179,168,500 gallons, which is 59 gallons per day for each inhabitant. This includes the supply of water for all purposes—for private and public use.

The present population of Paris is 2,700,000. The water rent for householders is 20 francs ($3.86) per annum for a daily supply of 125 liters (27 gallons 2 quarts), 60 francs ($11.58) for a daily supply of 500 liters (110 gallons). For a daily supply of 2,500 liters (550 gallons) of river water the annual rate is 150 francs ($28.95); for same quantity of spring water 300 francs ($57.90); for 5,000 liters (1,100 gallons) river water per day, 300 francs ($57.90), and 600 francs ($115.80) for a like quantity of spring water.

The total amount of water rents collected in 1901 by the city of Paris was 18,864,000 francs ($3,636,752). The expense written down in the budget of the city of Paris for 1901 for the water, repairs to aqueducts, rebate to the Compagnie des Eaux, salaries, etc., amounts to 13,794,450 francs ($2,722,330).

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BIRTHS AND DEATHS.

NUMBER OF BIRTHS NOT SATISFACTORY.

Consul-General Skinner, of Marseille, furnishes the following based on the report of the minister of commerce on births and deaths in France:

The official report of the French minister of commerce, dated November 3, 1905, sets forth that the excess of births over deaths reported in France for the year 1904 is 57,026, as against an excess in 1903 of 73,106. The diminution in the number of births is fairly general, extending to 56 departments out of 87. The increase in the number of deaths as compared with the number reported in 1903 is distributed in 41 departments out of 87. The minister concludes: "The situation of the country as regards increase of population is unsatisfactory, particularly if one compares the results established in France with those obtained in the principal European States." In a total of 818,229 children born in France in 1904, 71,735 were illegitimate, this proportion having been maintained without substantial change since 1894. The last census, in 1901, gave the total population of the country as 38,961,945. I annex hereto tables setting forth the principal facts appearing in the minister's report.

A table is furnished showing the average excess of births over deaths per 10,000 inhabitants of the principal European countries. The figures are tabulated in periods of four years beginning with 1821 and including 1900. The following shows the excess of births in the periods beginning with 1841–45:

Period.	France.	Germany.	Austria.	Hungary.	Belgium.	Great Britain.	Holland.	Italy.	Norway.	Sweden.
1841-1845	54	106	96	.....	94	.....	105	.....	130	111
1846-1850	28	81	6	.....	38	.....	33	.....	121	99
1851-1855	20	74	23	.....	70	.....	89	.....	152	102
1856-1860	28	104	100	.....	87	127	65	.....	165	120
1861-1865	38	109	89	.....	90	126	106	.....	133	134
1866-1870	15	98	70	.....	62	121	101	66	125	92
1871-1875	5	107	67	.....	92	134	106	64	127	124
1876-1880	29	131	82	77	102	145	136	75	151	120
1881-1885	25	113	79	116	102	141	134	106	140	119
1886-1890	11	121	88	115	91	126	131	103	138	124
1891-1895	1	130	95	98	88	117	133	105	135	106
1896-1900	13	147	116	115	109	116	150	110	146	108
1901-1903	19	149	125	116	113	115	155	104	150	108

A table is also furnished showing the amount of population in France for the ten years ending with 1903. From this table it appears that the annual averages were as follows: Marriages, 292,747; divorces, 7,434; total children born, 846,246, of whom 431,748 were males, and 414,498 females. These figures do not include 40,744 stillborn children. The average annual deaths were 797,001, of which 413,954 were males and 383,047 females. The annual average excess of births was 49,245. For the year 1894 the excess of births was 57,026.

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SPAIN.

NATIONAL PROGRESS.

COMMERCIAL REVIVAL—BRIGHT FUTURE OUTLOOK.

Consul-General Ridgely, of Barcelona, has furnished a comprehensive report on the trade of Spain during the past year and the commercial outlook for the future. From this report the following extracts relating to the trade of that country with the United States are taken:

The tanning industry in this district, and in fact throughout Spain, has been in the very best condition for the past two years. In view of the well-maintained exports of shoes this fact will appear strange until it is explained that almost all the dressed skins used in making the uppers are now being imported from abroad. France, Germany, and the United States are dividing the trade between them. The duty on these dressed skins is 2.50 pesetas per kilo when imported from France or Germany, and 3.25 pesetas per kilo when imported from the United States [pesetas=19.3 cents, kilo=2.2 pounds], but in spite of this heavy tax the lighter weight and far superior finish of the foreign article have enabled it to command a large sale in Spain, obliging the native tanners to either close their works or reduce their output. It must be admitted that the majority of the tanners are ignorant and without means to enable them to keep abreast of the improvements that science is continually introducing into this industry. Capitalists have not lost sight of the opening here offered, but until the final settlement of the new tariff no steps can be taken for raising the level of this industry.

FIGHT FOR NEW MARKETS.

Spain's export trade is growing. Stimulated by the fear that the loss of the colonies would deal a fatal blow to their exports, Spanish merchants and manufacturers awoke to the necessity of trying to gain a footing in foreign markets, to which they had hitherto been indifferent, and the result is shown by the increased export returns to those countries. The scheme for sending a number of commercial travelers as a deputation to the South American States to study the classes of goods being sold there by other countries has not so far been carried out, owing to the difficulty of raising the necessary funds, manufacturers wishing the Government to bear the expense.

AMERICAN MANUFACTURED PRODUCTS.

No very marked increase is noticeable in the imports of American goods. The use of typewriters in this country is, however, steadily gaining ground. Some German typewriters are being actively pushed, but the American machines, though more expensive, are preferred. A limited demand for slot machines arose during the year, but after their novelty has worn off it is doubtful whether any regular trade can be looked for in these machines. The termination of the treaty with

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Switzerland this year gave ground for hoping that American watches might be freed from the heavy differential duty which now bars their sale in this market. but a modus vivendi has been arranged to enable negotiations to be carried on without alteration of the duties, pending the final agreement as to a treaty. It is difficult to see how any very important increase in the sale of American manufactures can be expected unless some reduction in the duties can be obtained. Certain lines which can not be bought elsewhere will of course continue to be sold here. Possibly, if some properly organized permanent exposition of American manufactures were to be established here, it might do much to awaken an interest in them, and it would then be possible to compare them with certain lines of German goods now being exhibited by a firm of commission merchants. The expense of such an exhibition, though not necessarily very great, would have to be defrayed wholly or in part by the American manufacturers, for in the present state of commercial relations between the two countries I have found no firm here sufficiently enterprising to take up the scheme until a more favorable customs tariff be adopted.

NEGLECT OF AMERICAN SHIPPERS.

In May of the present year I transmitted to the Department a protest of Barcelona cotton importers against the defective manner of packing American cotton, and it is confidently hoped here that American cotton exporters will finally see the necessity of taking this complaint into serious consideration. I must now call attention to another serious shortcoming of American exporters in the matter of forwarding bills of lading of merchandise shipped from the United States to Spain. More than half the time the merchandise arrives at this port consigned to order, unaccompanied by the necessary bill of lading. As a consequence, the consignee can not be advised; and it becomes under the law the duty of the collector of the port to put the merchandise up and sell it at auction to the highest bidder. By aggressively intervening, this consulate-general has prevented in several instances the sacrifice of valuable consignments of merchandise; but this can not always be done, and our exporters are again warned of the danger of shipping to Spain in this irregular way. In all cases of shipments to Barcelona, or to any other port in Spain, the bill of lading covering the shipment should be sent by registered mail to the receiver at the earliest possible moment. I say registered mail advisedly, and exporters will do well to follow this rule. If the bills of lading are sent as soon as the merchandise is embarked, the former will always arrive long before the merchandise itself gets here.

AMERICAN LUBRICATING OIL.

Only about 1,000 barrels of American lubricating oil are sold annually in Barcelona. But for the discriminating tariff, this figure for Barcelona alone could easily be increased to 12,000 barrels. There is a strong feeling here in favor of American oil, and only the tariff keeps it from outselling all others. It is conceded to be the best, and as the quality of machinery used here improves, the demand for a better class of lubricating oil increases accordingly. Importers interested in this trade sincerely hope that any new treaty between Spain and the United

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States will take this question into consideration. The duty on American oil is 60 pesetas (about $9) per 100 kilograms (220 pounds), while on oils from other countries it is but 50 pesetas the 100 kilograms. Of the 1,200 barrels of American lubricating oil sold here the greater part comes from jobbers at Antwerp or Hamburg, and the oil is generally not even entered as American, but as Belgian or German.

The first cargo of petroleum that ever reached this port in a sailing vessel from the United States arrived in July of this year from Philadelphia. The oil was carried in tanks, and the bark, which was of French nationality, made a very good and quick voyage. Only part of the oil was for this port, the remainder being consigned to Marseilles, whence the vessel arrived in due time. It is understood that this method of transporting petroleum may be more generally adopted than it has ever been before, the sailing vessel being considerably cheaper than the tank steamer.

MINERAL ORE MOVEMENT.

Consul-General Ridgely writes that Consular Agent Carlos Yensen, of Bilbao reports that trade in the busy mining and commercial district of which Bilbao is the center has not materially improved during the present year, and is still suffering from the crisis of 1904. There is some evidence of a desire to reinvest money in commercial enterprises, however, and it is believed that during 1906 normal conditions will be restored. Prices of iron ore are generally the same as in 1903 and 1904.

During 1904 mineral ores aggregating 4,427,187 tons were exported from Bilbao, of which England received 2,490,536 tons; France, 838,767 tons; Holland, 806,726 tons; Belgium, 280,105 tons, and Germany, 11,053 tons.

The principal foreign imports at Bilbao are coal, codfish, lumber, and wheat. The coal comes almost entirely from Great Britain, though Holland, France, and Germany furnished a small percentage of the total imports during 1904. The codfish imported at Bilbao came principally from Sweden and Norway, with occasional imports from France, England, and Denmark. The lumber imported during 1904 came exclusively from France and Sweden, and the wheat from South America and Russia.

SWITZERLAND.

UNSURPASSED MATERIAL PROSPERITY.

A REMARKABLE SHOWING BY THE MOUNTAIN REPUBLIC.

Switzerland is largely dependent upon the outside world both for food and for the raw materials used in her industries. A strange and striking amount of manufacturing is going on among her mountains. In 1904 Switzerland's imports were valued at about $260,000,000 and exports $160,000,000. Such a trade for 3,315,343 people is significant of energy and suggestive of enterprise. Having gathered capital by long years of careful economy and saving, Switzerland has learned a lesson from her French and German neighbors that has helped her to a material prosperity unsurpassed by any people in Europe. Of

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course her hills have helped her, too, for the money spent in hotels, on railroads, and in shops by visitors is enormous, running far up in the millions.

The prosperity of the Republic reflects the prosperity of the rest of the world. If times are bad elsewhere, Switzerland feels it in the falling off in the number of visitors to the mountains, lake resorts, and places of interest. Indeed, these two things are so delicately adjusted that Switzerland begins to feel the effects long before the unsuccessful season opens, for she records it in her bookings months before the season begins. If the outside world is well off, Switzerland feels it; if the outside world suffers, Switzerland suffers.

Three million persons are said to pass in at her gates every year, leaving $30,000,000 in the hotels alone. Add to this fares on railroads, for carriage hire, boats, etc., and the millions spent in shops for carved woodwork, clocks, toys of all kinds, souvenirs, laces, etc., and one begins to get a fairly good idea of what it means to Switzerland to have the Alps as a background for her financial progress and prosperity.

AGRICULTURE AND MANUFACTURES.

Curiously enough the country, in spite of its mountainous character, ranks high agriculturally. It produces, consumes, and exports enormous quantities of cheese, fruits, wines, and cattle. Many of its cheeses are fairly well liked all over the world. Her cows are carried to hundreds of places in France, Germany, Holland, England, and Italy each summer to supply fresh milk at the numerous continental and English-Swiss milk cure houses. On the mountain sides rich pasture lands are possible. The sweet grasses give the milk a pleasant flavor. As a by-product of her farms she has the making of large quantities of condensed milk. This she exports.

Much depends, at all times, upon the vagaries or changes of fashion, as far as Swiss manufactures are concerned. Many of these are exceedingly clever. Embroideries, laces, silks, particularly those of St. Gall and Zurich, have gone into all parts of the world. Swiss watches, too, are popular. Geneva, and the country round about that city, send large quantities of these to all parts of the world, particularly to those parts that can afford to pay a fairly high price. Many of the interior towns are devoted to the manufacture of machines, weaving of hosiery and fine-grade underwear. Chocolate is a leading manufacture.

BALANCE OF TRADE.

The balance of trade—that ever present economic bugaboo—is always against Switzerland. She buys more than she sells—witness 1904 figures, as given in the first page of this report, $260,000,000 against $160,000,000. How does she do it, and how long can she continue to do it? Switzerland's best buyers are Germany, 25 per cent; Great Britain, 20 per cent; France, 12 per cent; the United States, Austria-Hungary, and Italy about in the order named.

The principal imports of the Republic are glass, chemicals, machines, vehicles, iron, brass, copper, precious metals, various minerals, oils, fats, raw cotton, raw silk, wool (pure and mixed), articles of dress, clothing, shoes, etc. An effort might be made by American manufacturers, independently when necessary, conjointly when wise, to

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capture a large part of the Swiss market. The United States could sell Switzerland machines, glass, vehicles, iron, brass, and copper. That we sell her some now is true; we might sell more and buy more, for after all the healthiest trade is reciprocal trade. If the Swiss are able to beat us in the building up of certain kinds of marketable goods it may pay to buy from her, paying for them with products produced here. A people that buy $260,000,000 worth of goods every year is worth studying. China's 450,000,000 do not import as much.

AMERICANS AT SWISS HOTELS.

The official statistics recently published show that from May 15 to October 15, 177,085 strangers stopped at hotels and boarding houses of Geneva. In explanation of these figures Consul-General Guenther, of Frankfort, says that of the 177,085 strangers, 26,569 were Germans, 9,618 Englishmen, 35,114 Swiss, 68,513 Frenchmen, and 14,177 North Americans. It is evident that this large number of Americans, who naturally belong mostly to the wealthy classes, would purchase many articles of American manufacture, of which they might be in need if they were on sale in Geneva or other places they visit. Americans usually visit different cities in Switzerland, notably Lucerne, Interlaken, Berne, Zurich, etc. In most of the European cities articles of English make intended for both sexes are sold in stores which exhibit signs declaring that fact. These stores appear to be doing a good business. In view of the fact that a greater number of Americans travel in Switzerland and other European countries than Englishmen; that American visitors stay longer abroad than the English, who often run over from England to France, Belgium, Germany, Switzerland, etc., for perhaps one or two weeks, and consequently are less liable to need many articles which would be required through long absence from home, it would seem as if "American stores" of this kind would do a good business and be the means of selling many American articles.

FREE ZONES.

THEIR PRIVILEGES AND INFLUENCE.

Consul Keene, in the following report, explains the peculiar situation in which Geneva is placed by the establishment of free zones. He writes:

The city and canton of Geneva, which is united to Switzerland on the northern side by only a small strip of territory of about 4 miles wide, measures about 15 miles in length and from 6 to 10 miles in width. It is, therefore, almost entirely surrounded by France. Natural or rather chorographic boundaries, however, are far more distant, as Geneva has, from the remotest time, exerted a great influence over the surrounding region. It is the reason why the international treaty of Vienna, of November 20, 1815, stated that on the west of the canton of Geneva the free zone of Gex would have its limits on the west of the Jura Mountains, i. e., from about 7½ to 11 miles farther than the political boundary. The free zone of Gex is about 25 miles long and from about 7½ to 11 miles wide. Far more important is the free zone of the French department of Haute Savoie. It derives its origin from two sources.

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(1) The narrow strip of land which surrounds immediately the canton of Geneva on the southeast and north is guaranteed by the treaty dated March 16, 1816, signed by the King of Sardinia, to whom Haute-Savoie belonged at the time, which treaty was confirmed and recognized March 24, 1860, by France.

(2) According to the desire of the territories ceded to France in 1860, a free zone—the most important—was created by law, which became effective on January 1, 1861. It covers the entire district of Thonon, the district of Bonneville, in which Chamouni and Mont Blanc are situated, and the greatest part of the district of St. Julien, 25 miles northeast, 41¾ miles southeast, and 11 miles south of Geneva Canton.

ADVANTAGES TO GENEVA.

The privileges conceded to the free zones may be condensed as follows: Their inhabitants, as consumers and as purchasers, live according to the rules of absolute free trade. They reside outside of the customs lines, since the free zones are situated between the French customs lines and the geographical boundaries of France, on the other side of which are situated the Swiss customs. Therefore the inhabitants of the zones have the right to receive free of duty all products coming from foreign countries or from France.

From the foregoing will be seen the advantages of this lately much discussed situation. Whereas the city of Geneva imports from the zones a great number of agricultural products (free of duty according to a special clause of the treaty between France and Switzerland), the city of Geneva exports to and sells in the zones all sorts of goods to about 220,000 people. Geneva is the natural center of the railway system of the region. All the railways and railroads start from Geneva or are within easy reach of this city.

WATCHES AND MUSICAL BOXES.

Consul Keene, of Geneva, furnishes a brief report on Switzerland's watch and musical-box industries. He writes:

If there had been no Russo-Japanese war the Swiss watch manufacturers would have had a good year in 1904, and this despite the new decrease of export to Great Britain. The best clients of Switzerland are still Russia, Germany, and Great Britain. The consignments to Japan, which have been decreasing year after year, remained practically the same in 1904 as in 1903, but such was not the case with the other countries of the Far East, where a decrease is noted. The first six months of 1905 show an increase of $965,000 over the corresponding period of last year for the whole exportation. Nickel and oxydized steel watches are increasing in number, whereas silver watches are on the decrease. Up to 1902 the number of the nickel and steel timekeepers was less than the silver articles. Since 1903 it is the reverse, although the number of pieces of both kinds added together remained the same.

In 1902 America imported from Switzerland 88,783 gold-plated pieces; in 1903, 59,790, and in 1904 only 34,775. France imported 106,957 nickel pieces in 1902, 125,930 in 1903, and 176,251 in 1904.

Musical boxes have found in phonographs, gramophones, and pia-

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nolas of all kinds keen competitors, and exports fell from $590,580 in 1893 to $399,703 in 1903 and $308,800 in 1904. The year 1905 will not give better results at the end.

MANUFACTURE OF SILK.

The export of silk goods manufactured in Switzerland amounted in value in the year 1904 to 110,887,000 francs. Consul-General Guenther, of Frankfort, furnishes the following, showing the countries to which the goods were exported:

	Francs.
Great Britain	48,020,000
France	20,464,000
United States	13,962,000
Austria-Hungary	5,564,000
Germany	5,337,000
Belgium	2,713,000
Balkan States	2,026,000
Canada	2,166,000
Argentina	1,900,000
Scandinavia	1,369,000
Italy	953,000
British India	763,000
Holland	720,000
Spain	564,000
All other countries	4,366,000

The silk Shappe spinneries exported in 1904 to the value of 23,893,000 francs, representing 11,083 metric hundredweight (220 English pounds). Of this, 6,579 hundredweight were shipped to Germany, and 1,969 hundredweight to the United States.

BELGIUM.

ACTIVITY IN COAL FIELDS.

THE BRIQUETTE IRON AND STEEL INDUSTRY.

Consul McNally, of Liege, reports great activity in the coal fields of Mons and Charleroi, as well as those of Liege, and that the product of the home mines is taken as soon as mined. This applies to the industrial as well as the domestic qualities. The consul writes:

This excessive demand is looked upon with suspicion. It is accounted for by reason of the stagnation in the coal business between Germany and Belgium. The market is, however, firm and the prospects for the coming year are very bright. The only possible interruption to present conditions is the claim of the workingmen which might result in a strike. On existing contracts prices are maintained, and upon the supplemental deliveries the price is favorable, but this is too small a matter to appreciably affect trade conditions. The coke syndicate has decided to raise the price of coke of the ordinary quality on January 1, 1906, 38 cents and that of the half washed 58 cents.

THE BRIQUETTE INDUSTRY.

The consul furnishes a statement of the briquette industry for the ten months ending with October, from which it appears that there were

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exported for the period of 1905, 405,146 tons against 452,177 tons during the corresponding period of 1904, a decrease of 47,000 tons. On this subject he writes:

On November 20, in response to an invitation from the Government, bids were presented on six lots of briquettes, comprising from 1,900 to 3,000 tons, for use in the Belgian Royal Marine.

During the first ten months of 1905 the exportations of coal amounted to 3,904,990 tons against 4,201,273 tons in 1904, and the importations to 3,384,970 tons against 3,001,057 tons. Belgium exported 826,087 tons of coke during the above period as against 724,890 tons in 1904, and imported 297,472 tons in 1905 as against 276,818 tons in 1904. The annexed table shows the exportation of briquettes and principal countries to which exported:

Country.	1905.	1904.	Country.	1905.	1904.
	Tons.	*Tons.*		*Tons.*	*Tons.*
Germany	58,140	45,996	France	141,770	207,847
England	8,715	5,570	Grand Duchy of Luxemburg	25,571	21,410
Brazil	1,547	1,500	British India	1,350	2,545
Chile	1,560	.....	Italy	5,046	5,125
China	700	16,770	Mexico	.....	3,650
Egypt	4,852	5,665	Netherlands	27,068	10,965
Spain	16,155	16,415	Switzerland	8,465	5,177
Kongo	9,828	7,370	Turkey	16,550	9,120
United States	68,412	70,160			

IRON AND STEEL TRADE.

While the British colonies afford a lucrative market for the Belgian iron and steel industry, they have to compete with three of the largest producing countries in this line, which is always a menace to their advance beyond present shipments. England of course is the first, followed by the United States and Germany in the order named. England ships all sorts of steel and iron products, the United States exports rails principally, while Germany sends chiefly half-finished products, shaped iron and wire, while the exports from Belgium are iron bars or bar iron, shaped iron, etc. In 1904 Belgium shipped to the British colonies about 100,000 tons, as against 400,000 tons from the United States and 115,000 tons from Germany. Among the shipments from the United States was 217,000 tons of rails. Belgium's exports, therefore, were about one-sixth of the total of about 600,000 tons. With the exception of Canada, which by reason of its geographical location is supplied greatly by the United States, England is maintaining her exports to her colonies. In 1903 her exportations were over 1,500,000 tons, while in 1904 it amounted to 400,000 tons. Of the above about 550,000 tons were shipped to India, which is nearly twice as much as in 1900. England has gained also in Canada and Australia, at the expense of Germany, for Belgium still maintains her position on these markets.

WEALTH OF THE KINGDOM.

The estimated increase in the personal wealth of Belgium for the quarter ending September 30, 1905, shows a remarkable advance. The total registered values are estimated at $2,100,933,000, an increase of

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$80,288,000. This increase represents 4 per cent of the total, which, for a short period of three months, all the varied items considered, is a remarkable showing. Government, city, and provincial bonds show a 14 per cent decrease; licensed bonds and shares having a fixed income show a 1.90 per cent decrease; bonds having a variable revenue show a 3.12 per cent increase.

Banks, insurance, and real estate enterprises show an increase of $15,612,928, or 12.12 per cent.

Railroads and canals show an increase of $333,311, or 0.70 per cent. Tramways and small railways show an increase of $16,530,643, or 14.84 per cent.

Steel works, machine shops, ironworks, and blast furnaces show an increase of $23,112,908, or 28.92 per cent.

Coal mines show an increase of $28,833,814, or 26.34 per cent.

Zinc, lead, and other mines show an increase of $12,024,479, or 23.60 per cent.

Glassworks show an increase of $4,031,963, or 40.96 per cent.

Waterworks show an increase of $586,720, or 8.28 per cent.

Gas and lighting enterprises show an increase of $3,947,429, or 19.29 per cent.

The textile industry increased $1,280,941, or 17 per cent.

The construction industry increased $636,900, or 5.90 per cent.

Divers industries, not included in the above, increased $23,143,981, or 38.31 per cent.

Foreign stocks and shares decreased $248,198, or 0.35 per cent.

This forms a total increase of $124,292,000, or 6.59 per cent, for the three months, which rise is general in all with the exception of three items.

EFFORT FOR TRADE EXPANSION.

The question of Mondale expansion is seriously agitating certain of the Belgian journals, which endeavor to point out the most important requirements for so doing. They put forth as a necessary and most powerful requisite the reorganization of the consular service, which they emphatically declare to be the most powerful factor in placing the standard of Belgian products not only in new fields, but in those whose markets are already established and where it is necessary to meet the keenest competition. In fact, this latter condition is the all-influencing principle in the proposed formation of a consular system that will win for its vast industrial and commercial output in countries now controlled by those of other nations. The position of Belgium in the matter of imports and exports, which per capita is the greatest in the world, is an encouraging factor in forcing her on to a further endeavor.

The consular service rather than a diplomatic one is thought to be the proper step in the trade expansion that her standing commercially demands. A committee was appointed to formulate a system in keeping with her capacity, and this committee has recommended certain important changes. The personnel of the Belgian consular service as it exists at present is 509 honorary consuls, who are not salaried, and but 31 consuls and 32 vice-consuls of career. Of the number of consuls more than half, or 18, are diplomatic agents. The committee urges an increase in the consular service, limiting the work to commercial and industrial inquiries, which they consider of much more importance than those exercising diplomatic functions. It is further

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specially recommended that the consular officers be liberally paid in a manner that will permit them to maintain a suitable rank and put them upon an equality with other countries and to be supplied with whatever is necessary to accomplish this end. The appointment of competent commercial and industrial counselors to advise the consular officers, when such advice is necessary, is also suggested, this appointment to rest upon the recommendation of the consul. It is further suggested that the consular officers be supplied with all the latest commercial and industrial reports and that they be expected, with the aid of industrial and commercial persons interested, to organize abroad Belgian chambers of commerce and museums or any other board or system that will tend to increase foreign trade. The Government is requested to publish consular reports as speedily as possible. The colonial section is inviting propositions and has many under consideration. They are giving the matter the greatest consideration..

AMERICAN MACHINERY AT LIEGE EXPOSITION.

The American machinery and machine-tool display in Machinery Hall at the Liege World's Fair was eminently representative and excited the admiration not only of those having knowledge of mechanical devices, but, on account of its being a working exhibit, was of interest to the layman, as evidenced by the crowds that daily witnessed its operation under the direction of skilled American mechanics, who were obliging, painstaking, and patient in showing the merits of their exhibits. Two American firms of note were particularly represented, which is shown by the fact that one received from the hands of a competent international jury the maximum number of points, which is the highest possible commendation, the other receiving the Grand Prix. These distinctions out of a mechanical exhibit of such great numbers from the greater countries of Europe is a matter of pride to our mechanical genius and a forerunner of an extensive European trade along those lines.

Other countries put forth their best efforts to show the merit of their mechanical productions, and it must not be lost sight of that England, Germany, and France had within their sections exhibits of the largest firms within their territory. It is the consensus of opinion among all mechanical minds visiting the exposition that the American machine tool leads the world. "All thoughtful observers," said the representative of the American prize winners, "who have made a study of the conditions of the machine-tool trade in Belgium, must admit that in the last ten years the Belgians have made tremendous progress, and that there are now two or three firms in Belgium making machine tools that would be no discredit to America."

TRADE WITH CHINA.

Published statistics give the following as the trade with China for the past year:

Railway cars	$399,510
Machinery, not denominated	208,826
Steel, unfinished, sheets and bars	434,636
Steel, finished	418,231
Brass and nickel	11,580
Cast iron, finished	12,545
Old iron	3,524

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Wrought iron	$1,056,096
Finished iron	415,722
Galvanized iron	2,509
Zinc	56,742
Total	3,019,871

CEMENT MANUFACTURE.

Consul-General Guenther, of Frankfort, writes that in the year 1904 the exportation of Belgian cement amounted to 588,295 metric tons, valued at $3,115,000. Great Britain was the chief customer, taking of above exportation 231,213 tons, Holland, Argentina, Brazil, and Mexico coming next in the quantities taken. It is reported that the Belgian, Dutch, and German cement works have organized a syndicate which for the term of nine years is to regulate production and prices.

GERMANY.

FOREIGN TRADE.

IMPORTS AND EXPORTS FOR NINE MONTHS.

Consul-General Wright, of Munich, furnishes a table showing the extent of Germany's trade for the nine months ending September, 1905. The value of imports in 1905 is estimated at $1,257,500,000 against $1,205,500,000 for the same period in 1904. The exports are valued at $1,028,500,000 in 1905, against $965,250,000 for the corresponding months in 1904. The following table gives the quantity in tons of Germany's export and import trade for the nine months ending September 30, 1905, compared with the same months of the preceding year:

Articles.	Imports.	Exports.	Articles.	Imports.	Exports.
Animal products	1,779,659	88,882	Leather	74,683	174,671
Brushes	6,578	18,032	Linen	179,419	133,261
Calenders	1,963	2,051	Oils and fats	6,682,049	1,698,346
Cattle	1,914,146	123,199	Ores and asbestos	76,464,169	57,213,027
Chemicals	10,461,087	8,412,115	Paper	552,024	1,925,129
Clothing	4,226	79,446	Petroleum	8,126,406	167,091
Coal, coke, and turf	135,469,775	156,927,509	Printed books	56,011	181,158
Cotton goods	3,533,898	993,765	Rubber	166,779	115,119
Copper	940,325	757,780	Silk	54,510	51,448
Earthenware	1,674,422	3,104,969	Soap and perfumes	12,560	89,465
Flax, hemp, jute	1,889,699	398,690	Stoneware	10,504,147	6,577,050
Furs	4,374	4,273	Straw goods	19,986	12,933
Glass	88,119	1,214,187	Tar, pitch, etc	1,639,882	996,590
Groceries	10,679,145	11,310,073	Tin	101,655	36,792
Hair and feathers	124,461	39,104	Waste	12,051,051	1,369,862
Hardware	6,808	323,222	Waxed cloth	3,229	12,218
Hides and skins	1,222,920	467,471	Wheat	56,877,075	6,721,460
Hops	9,558	37,214	Wood	45,120,960	4,177,234
Illuminants	1,309	3,745	Wool	234,835	664,135
Instruments, machines	1,071,885	2,672,347	Zinc	1,909,900	688,983
Iron	2,351,843	23,424,314	Miscellaneous	13	46,802
Lead	609,488	336,973	Total	394,676,083	293,792,135

Compared with 1904 the imports show a net increase of 42,573,866 tons and the exports a net increase of 10,085,334 tons.

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PEAT AND COAL.

ADVANTAGE GAINED BY COMBINING BOTH FOR FUEL.

Consul Diederich, of Bremen, reports recent experiments made for the purpose of using by-products for cheapening fuel. The results have been far more successful than was believed possible by the parties making the experiments. An interesting feature of the fuel's work is found in its effects in brickmaking. The consul writes:

A number of interesting experiments have been made recently in using compressed peat and coal mixed for fuel in a brickyard, and the result has been so favorable that it is worthy of note, inasmuch as it will no doubt open a new field for the use of peat as fuel in the manufacture of bricks. In the neighborhood of Jever, Oldenburg, an excellent, heavy, blue clay is found which, according to its chemical composition, was considered to be suitable for the manufacture of hard clay bricks which are used in that country to pave roads. All efforts to manufacture such bricks from this clay proved unsuccessful until the proprietor of a certain yard, much against his own conviction, followed the advice of a friend and used for fuel a mixture of one part of peat and ten parts of coal. The result was surprising. Instead of the light-red brick, which had been produced formerly, a hard and brown brick was obtained. The experiments were repeated and the fuel was mixed in various proportions until, at last, with a mixture of equal parts of peat and coal, a first-class brick was produced.

CAUSE AND EFFECT.

The cause of this very surprising result is theoretically evident at once. Peat, which contains much tar, has a very large and long flame of gas which intensifies the burning of the coal, leaving the smallest possible amount of ashes and slag, and hence a much greater heat. Again, the spaces between the bricks, as they are piled up in the kiln in order to be baked, will be more thoroughly heated by the long flames, and the lower as well as the upper layers of the bricks will also be baked more evenly. It is claimed that besides the advantages mentioned, this mixture of fuel will prove to be very cheap in all countries where peat is found, and that it can be profitably used under steam boilers in locomotives, etc., as the good quality of peat leaves only 1½ to 2 per cent ashes, and the coal being almost completely consumed in this combination, will leave but little refuse or slags.

BUILDING LAWS.

EFFORTS TO SECURE SAFETY AND HEALTH.

In the following report Consul Harris, of Mannheim, calls attention to the wise, humane, and æsthetic provisions of a proposed law in Baden, Germany, dealing with matters of construction, sanitation, etc., in building. While the law seems to leave little of what is called liberty in this country to the owners of property, it will meet with the approval of all persons who have seen the sides of buildings defaced

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by abominable advertisements and whole landscapes made hideous in the same way. The report follows:

The outlines of a new building law for the Grand Duchy of Baden has recently been submitted to the local authorities of the State for their consideration and approval. It is expected that a law will be enacted embracing the main features of this outline. The proposed law consists of 303 sections, and includes several enactments now in force with various modifications, as well as several wholly new provisions. Much of the law provides for measures intended to secure the highest degree of safety in the construction of buildings, whether public or private, and deals with materials to be used, the construction of walls, chimneys, sanitary appliances, building permits, official inspections, exits in case of fire, etc. Among the new portions of the law are provisions relating to department stores and similar business houses. The use of only fireproof materials in the structure itself is prescribed, as are abundant stairways, exits, fire walls, and other precautionary measures. No point in the building used for department store or similar purpose is permitted to be more than 25 meters (82 feet) measured horizontally from an exit out of doors. Provision is also made for the separation of workrooms, warehouses, and residence apartments from such storerooms by fireproof walls or floors.

PROTECTION OF LANDSCAPES AND MONUMENTS.

The new statute provides for the enlarging of an existing law against the disfiguring of landscapes by unsightly structures, advertisements, etc. This class of legislation is in accord with that of most, if not all, the German States in which the right to prevent such disfigurements is exercised by the State independent of the question whether the advertising matter or other objectionable thing is placed on public or private grounds. Under the proposed law the authorities of each district—of which there are 53 in Baden, corresponding somewhat to our counties, though as a rule considerably smaller—are authorized to determine what landscapes, buildings, or monuments of an historical or artistic value should be protected by the statute. Violations of the statute are made punishable by fine, with or without imprisonment. The statute now in force, as well as the proposed law, provides against the display of pictures, advertisements, or other things calculated to mar or disfigure any especially attractive landscape or detract from the artistic or æsthetic effect of any building or other structure of special importance as an historical or artistic monument, or be highly prejudicial to any street or part of a city where such building or structure is situated. The alteration of the exteriors of buildings or parts of buildings, the preservation of which would be of historical or artistic value, may be prohibited by the local authorities, as may the construction of other buildings in the neighborhood calculated to disturb or interfere with such historical monuments. In cases of disagreement as to what landscape or monument is entitled to the protection of the law, appeal may be made to the proper branch of the State government of Baden.

BUILDINGS USED AS RESIDENCES.

Much prominence is given in the law to the means afforded for ventilation and for other sanitary measures in rooms used for residence,

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and especially for sleeping purposes. The use of kitchens, workshops, or working rooms for sleeping purposes is made unlawful, as is the use of rooms which do not afford at least 10 cubic meters (353 cubic feet) of air space, and at least 3¼ square meters (38 square feet) of floor space for each adult person or person over 10 years of age. In families of ten or more persons a separate room for cooking must be provided; children of 12 years of age or more are not permitted to sleep in rooms occupied by the parents, nor two of the opposite sex to occupy the same room. In towns of 10,000 population or more regular inspection of residences is provided for, while in towns and villages of less than 10,000 population such regulations for inspection may be adopted as the local authorities deem proper. Full provision is made for the appointment of special commissions for the inspection of residence buildings.

CONTRACT OF FLOUR DEALERS.

Reference to an agreement recently made by the flouring-mill owners and flour dealers in this locality may be of some interest as throwing light on the terms of credit and other conditions on which a staple article is to be sold in this part of Germany. Middle and northern Baden and the adjoining Rhine Pfalz have become the centers of an important milling business, for which several large modern mills have been built. Four of these are in Mannheim and Ludwigshafen, one of the largest and best-equipped mills is at Kehl, Baden, and others of less importance are at various nearby points. Considerable feeling against the large mills has for some time existed on the part of the smaller mill owners who have seen their trade absorbed by the larger concerns. Various efforts have been made to harmonize these differences. The agreement recently made was the result of a conference of representatives of the associations of small millers of Baden and of the Pfalz, the owners of the large mills, and representatives of the South German Flour Dealers' Association. Among other stipulations of the agreement are the following:

The price of flour is to be reckoned per 100 kilograms (220 pounds), gross weight including sack, delivered at the railway station of the buyer, or if delivered by wagon of the miller at the place of business of the buyer, unloading of car or wagon to be at the cost of the buyer. A credit of not to exceed three months, without interest, can be allowed. Accounts standing for more than three months are to bear 5 per cent interest. Payment at the time of or within ten days from the delivery entitles buyers to 1 per cent discount. Buyers may be required to give security at the option of the miller. The sacks belong to the purchaser of the flour, but on return in good order to the miller an allowance of 35 pfennigs (8¼ cents) may be made for each sack. The usual provisions are made for the agreement to cease to be binding in case of floods, strikes, or other circumstances making fulfillment impossible. Provision is also made for the assessment of penalties in case of breaches of the agreement.

FOREST LANDS IN BADEN.

Consul Harris, of Mannheim, writes that recently published statistics of Baden give interesting data as to the extent to which forests are

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protected in portions of Germany. The proportion of wooded lands in this Grand Duchy, with an area of about that of Connecticut, is somewhat larger than in most of the German States, due to the considerable area of rough or mountainous land not suited for agriculture. The care given to forest preservation and planting throughout the Empire is, however, as is well known, general, and is certainly in keeping with a far-seeing economy. The forest area in Baden in 1902, for which year the latest statistics were made up, was 5,625 square kilometers (2,172 square miles) or 37.3 per cent of the area of the Grand Duchy. Of this forest area, 51.6 per cent is in the region known as the Black Forest and 45.7 per cent in the northern continuation of this region known as the Odenwald. The tendency to protect the forests is shown by the fact that the area of wooded lands in 1902 was 3.6 per cent greater than that in 1888, and the forests were considerably improved in the quality of timber afforded. Of the forest lands, 17.6 per cent are public domain, the property of the State, 45.4 per cent belong to the towns and villages, while the balance is owned by private individuals, churches, or other societies. These forests are partly of pines and partly of deciduous trees, the respective areas being nearly equal, the ratio in 1902 being 49 to 51. The yearly income from the forests in the Grand Duchy is estimated at 27,000,000 marks ($6,426,000) and the total value of the timber now growing at 600,000,000 marks ($142,800,000). The protection of the forests and the replanting of those cut away are provided for by appropriate legislation, enforced byofficials especially designated for the purpose.

BANKS IN FOREIGN COUNTRIES.

Consul Harris, of Chemnitz, reports that German capitalists are busy establishing banks in foreign countries, which are destined to play an important part in the expansion of German trade. A few months ago three such banks were established, namely, one each on the east and west coast of Africa and Asia Minor. These have been followed quite recently by one in Sofia, Bulgaria, one in Central America, and one in Argentina. Germany has to-day twelve banks in foreign countries with a total capital of $16,660,000. These banks are beginning to exert a powerful influence in behalf of German merchants and manufacturers in foreign countries, and I am informed on good authority that many more such banks are to be established in the near future. The German merchant marine has grown to such an extent that cargoes are received and discharged in practically every seaport in the world. And as trade always follows a flag, so in this instance banks in foreign countries have been the logical outcome of the development of German shipping interests. The German banks in South America and the Near and Far East are different institutions from most banking concerns. They encourage German residents in those countries to engage in remunerative business and to embark on new enterprises by becoming a party to the scheme by advancing loans, etc.

MILITARY FIELD KITCHEN.

Consul Liefeld, of Freiburg, reports that the German Government has offered three prizes for the most practical and serviceable military kitchen for field purposes. The prizes are $1,190 for the first, $714

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for the second, and $476 for the third. The kitchen must be strong and durable, and yet so light that it can be transported easily by one horse even on uneven surfaces. The kettle must contain 150 liters (about 158 quarts) and must be so constructed that cooking may be done on the march. It is not required that there shall be a special seat for the driver, but a place must be provided for his luggage and also space for forage for the horse. Those who enter the competition must furnish a sample kitchen before February 15, 1906, to the war office at Berlin. It is not stated whether the competition will be opened to other than Germans.

FOREIGN STUDENTS.

RESTRICTIVE REGULATIONS—PRIVILEGES TO BE DENIED.

Early in November the German students of the Jena University held a mass meeting and prepared a petition, which was presented to the authorities of the university, asking that certain privileges now enjoyed by foreign students be modified or entirely withheld. Of the students' meeting Consul Brittain, of Kehl, writes:

The various German newspapers have recently made reference to the mass meeting which the German students of the Jena University held on November 2, 1905. At this meeting the students drew up a petition, which was presented to the protector and senate of the university. They request that foreigners should not be permitted to attend the recitations and lectures except as matriculated students, and then only on presentation of certificates proving that their preparatory education has been equal to that which is required of the German students. It is also recommended that foreign students should be obliged to pass an entrance examination in the German language, the claim being made that professors must frequently devote much time to foreign students who are not fully familiar with the German language, thus depriving German students of the necessary instructions. The German students also believe that they should have the advantage and privilege of being first assigned to the various halls and laboratories, and the foreign students assigned to remaining vacant places two weeks after the opening of the term. Many of the foreign students, living too far away to return home during the vacation, have remained in the various university cities, and consequently are the first to enter as the semester or term opens, and thus have a great advantage over those who enter later, the time of matriculation or enrollment extending over three to four weeks.

It is also suggested that the tuition fee for foreigners should be placed at a figure that will cover all expenses, so that the Government will not be incumbered with extra expenses caused by their attendance. The forming of societies by foreign students should be prohibited, and restrictions must be made on the political and moral tendencies of foreign students, especially referring to such from eastern European countries. Several years ago many of the German universities (Swiss universities also) tried the experiment of admitting females as students, and this privilege was quickly taken advantage of, especially by Russians. For various reasons these privileges have been curtailed or restricted entirely by some of the universities now. The Jena students

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are the first to petition in reference to these matters. It is anticipated that the students of other German universities will follow with similar petitions.

LARGE SHIPMENTS OF JEWELRY TO THE PHILIPPINES.

During the past four months, or since it has been necessary to consulate invoices for the Philippine Islands, the jewelry manufacturers of Pforzheim have had invoices for Manila amounting to nearly $25,000. During the same period many shipments under $100 in value were made, which would probably increase the above amount very considerably. The jewelry consists principally of ladies' chains, brooches, earrings, bracelets, rings, and pins. Much of the jewelry is of 12 and 14 carats gold, and also cheaper goods.

Pforzheim is a city of about 65,000 population and is devoted almost exclusively to the manufacture of jewelry, there being about 500 factories where jewelry is made. It is the jewelry center of Europe. The various manufacturers are very energetic and are careful to study the wants of their customers, and endeavor to please them regarding designs, prices, and terms of sale. From present indications the shipment of jewelry to the Philippines will amount to about $100,000 for the fiscal year. With the American manufacturer's advantage in distance and machinery—as much of the Pforzheim jewelry is made by hand—it appears that we should capture more of the trade of the islands.

The facts are the German manufacturer often wins by easy terms of sale as to credits and discounts and making what the customer wants, in quality and design, and the American maker loses because he demands cash before his goods leave America, and attempts to sell in the Philippine Islands designs suited to Philadelphia or New York trade. Recently a young German came to me and said he could sell fifty to seventy-five American machines of a certain make if he was sure the machines would do what was claimed for them. He offered to give good reference and pay one-half in advance for a sample machine costing about $350, and if it was as represented he would immediately place a large cash order, but the maker refused, thus sacrificing an order of $20,000.

FOOD ADULTERATIONS.

LARGE NUMBER OF CONVICTIONS.

Consul-General Richard Guenther reports that a large number of convictions took place for adulterating articles of food. The convictions, however, were not so large for that year as for 1902, a decrease of 6 per cent being noted. He writes:

During the year 1903, 3,091 persons were convicted in Germany for adulteration of articles of food. The largest number of convictions occurred at Berlin, where an increase from 598 in 1902 to 645 in 1903 is shown. For producing and keeping for sale and consumption unwholesome articles of food, 748 persons were convicted in 1903, against 394 in 1902. This large increase is due to the effects of the inspection law of June 3, 1900. In Berlin 59 persons were convicted

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for violating the provisions of this law, against 29 in 1902. For knowingly violating the rules with reference to animal epidemics, especially those for the prohibition of imports to prevent rinderpest, as well as the regulations to prevent contagion in the transportation of animals by railroad, and for the willful use of articles liable to spread contagious diseases before disinfection, 931 persons were convicted, against 1,173 in 1902, showing a decrease of 20 per cent. For knowingly violating the regulations for preventing the spread of infectious diseases 59 persons were convicted, against 67 in 1902.

ARTIFICIAL INDIGO.

Artificial indigo has injured one of the oldest and most important industries of the Indies, and of Salvador most severely, and will, in time, probably destroy it completely. The value of the exports of natural indigo from the Indies has decreased from about $17,000,000 in 1894 to about $2,600,000 in 1904. Of the indigo imported into Japan in 1904 three quarters was artificial. It is estimated that artificial indigo supplies at present 85 per cent of the world's demand and the price has declined 50 per cent. Germany is the largest manufacturer of artificial indigo. I find in official statistics that in 1904 Germany imported 260 tons of natural indigo at a value of $321,400, while her exports of artificial indigo were 8,730 tons, at a value of $5,160,000. Of this amount the United States took 2,162 tons.

THE PHONOCARD.

The so-called phonocard is finding much favor in France. Consul-General Guenther furnishes the following description of the novelty, which is taken from newspapers:

For producing the phonographic postal card an apparatus is used which records the human voice upon a piece of pasteboard of the form of the card. According to one report the phonocard possesses numerous advantages. The recording of the voice is done by an ordinary phonograph of simple construction, by means of a pencil with a sapphire point. This pencil makes its impression upon a suitable substance called "sonorine" spread upon the surface of the card. The "sonorine," which can be easily spread over pasteboard, possesses all the properties of a wax cylinder, and is in reality the invention. The signs are impressed in form of a spiral, beginning at the margin of the card and ending in a very small circle, and are impressed so deeply that the stamping by postal authorities can only destroy two or three words. The card has room for seventy-five to eighty words.

NORWAY.

POPULATION AND RESOURCES.

RAPID AND REMARKABLE INDUSTRIAL DEVELOPMENT.

Norway, just now attracting a great deal of attention, is a remarkable country. Fish in its waters and wood in its forests make up a large part of the national resources. With a long line of curiously indented coasts, whose waters are washed up to it by the Gulf stream, it holds and has long held an important place in the world's carrying

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trade. The people are honest and thrifty, hard and willing workers. On land or on sea it is always the same. Work seems to be their element. If the country is happy, prosperous, and progressive, it is not because of any peculiar benefits bestowed by nature, unless it be the willingness of everybody to work.

FISHING INDUSTRY.

Fishing is perhaps the most important line of business pursued by the people. The wide spaces of their own seas, particularly the parts that lie near the Loffoden Islands, are full of cod, herring, and mackerel. Salmon abound in the rivers, of which the country has abundance. The waters of the wide world pay tribute to Norway, for some of her whaling vessels go into the far north or to the south and some to Newfoundland and into the seas north of Scotland. In 1904 Norway exported 31,000,000 kilograms (kilogram equals 2.2 pounds) of fresh cod and 17,100,000 kilograms of dried cod. She sent forth 680,000 hectoliters of salted herring and enormous shipments of mackerel. Almost all kinds of fish are put up in boxes and barrels for transportation to all parts of the world. As means of transportation improve, the fresh-fish sales increase. As a by-product she bottles oils and makes large quantities of fish fertilizers. Her whaling efforts in 1904 permitted her to send out 120,000 to 130,000 hectoliters of whale oil, in addition to all the other products of the whale.

WEALTH OF THE FORESTS.

In the forests Norway has innumerable firs, pines, hemlocks, oaks, and other useful trees, from which wood is cut for many parts of the world, particularly for England and continental Europe. The forests are run scientifically, the trees being cut only when they are best fitted for the purposes for which they were planted. Only expert woodsmen or foresters are in the woods—men trained in good schools, similar to those that have made forestry both an art and a science in Germany. The woods cover fully 20 per cent of the country and are carefully cultivated on such parts of the soil as would be practically unfit for farming. Two million cubic meters of wood are exported each year. Most of it goes out in the rough, although large quantities go out ready for the mines and general building purposes. Supplementing the forests are the furniture, barrel-stave, match, and pulp factories. Three thousand tons of matches are sold every year and millions of dollars' worth of barrels, staves, and pulp for paper making and other purposes. The wood for pulp making is put through both mechanical and chemical processes for crushing. As much as 600,000 to 700,000 tons of pulp are exported annually.

AGRICULTURE.

Farming is popular. The people love their sterile soil. They watch it, work on it, nurse it into fertility, spreading on it first seaweed and fish fertilizers. The raising of cattle, the production of butter, cheese, condensed milk, and the raising of poultry are conducted on artistic and scientific principles. In 1904 the Kingdom sent out 1,527,000 kilograms of butter and 770,000 kilograms of margarin. There is no law against the manufacture of margarin, but there is a strict law, backed by a public sentiment, against labeling it butter. Herein the

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Norwegians excel. It is to their industrial and commercial honesty that they owe a very great deal of the progress and prosperity that has marked recent years.

MINING INDUSTRIES.

Mining is an important feature of Norway's industrial life. Iron, copper, feldspar, granite, etc., abound. In 1904 Norway exported 116,550 tons of iron pyrites and 2,700 tons of copper. Her iron is needed in Birmingham, Sheffield, Solingen, and all over the world for the making of certain instruments, implements, and tools. She exported 21,000 tons of feldspar in 1904. Much of this is used in the porcelain factories of the outside world. Granite and other building stones are exported to England and continental Europe. Over 190,000 tons were taken out in 1904.

MANUFACTURES.

In manufacturing Norway is beginning to stride forward. Her streams are giving her cheap power. This is leading to the establishment of all kinds of plants for the making of electrical appliances. Her shipyards are fairly busy and give promise, once cheap power is put at their disposal, to do a great deal more in the future than was done by them in the past. Cotton mills are likely to spring up on the banks of her streams because of the soft, moist, climate furnished by the waters of the Gulf stream and the cheap power to be furnished by her streams. Nail and horseshoe factories, because of cheap power, cheap iron, and intelligent labor, are sure to increase. The manufacture of calcium carbides, because of the presence of vast quantities of the raw material required in their manufacture, and because of cheap power and skilled labor, is growing fast, and when water or acetylene gas is perfected it is bound to increase. Five thousand seven hundred tons of carbides were exported in 1904.

Such a country, so situated, so eager, earnest, energetic, offers a fair field for American enterprise. Its proximity to our shores, the nature of its raw materials, the prospects of the future, the progress and prosperity in the past would seem to warrant efforts on our part to find out just what the prospects are for us to sell hundreds of saws, wood-cutting and wood-working machines, furniture machinery, etc. It is only eight or ten days distant from our shores—all the way by sea, whereon transportation is cheap and easy. A large and profitable reciprocal trade may easily be built up by both countries going over the goods of the other carefully.

TOILET ARTICLES.

SLIGHT IMPORTATIONS FROM AMERICA.

Consul Bordewich, of Christiania, wrote the following letter to a chemical laboratory company in the West in reply to an inquiry regarding the extent to which toilet articles were imported into Norway:

Toilet articles are to a large extent imported from Germany, France, Sweden, and other European countries, some also from America, while

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others are manufactured in Norway. Whether you will be able to do business over here depends largely on your prices, terms, and the quality of the goods. Liberal advertising is a requisite. Below are names of the principal dealers in this class of goods in Christiania, with whom correspondence may be conducted:

K. A. Jorgensen, Karl 12tes gade 3; D. & G. Lunde, Karl Joh. gade 20; Waldemar Schjoldborg, N. Slotsgade 17; Daniel Steen, Kongens gade 33; Steen & Strøm, Kongens gade 23; F. Chr. Wolff, Grendsen 12.

The best way to introduce your goods would be to let them be handled by a pushing and responsible local agent. Of suitable people for such purpose I will name: I. Mollbach-Tellefsen, Storthingsplads 7; Ustvedt & Prøsch, Prinsensgade 23. If credits are given bank references should be asked for.

In your line, as in many others, it is difficult to find an opening for the reason that the dealers have formed connections which, as a rule, are of many years' standing. They do not like to form new ones except for good reasons. If a new store for sale of exclusively American perfumeries and toilet articles could be opened in this city I believe it would pay good interest on the investment.

AUSTRIA.

THE TEXTILE INDUSTRIES.

EXTENSIVE FACTORIES AND INDUSTRIAL COMMUNITIES.

Consul McFarland, of Reichenberg, Austria, furnishes an interesting report on the textile industries of Austro-Bohemia and furnishes a history of the early establishment of these industries in Bohemia. His report follows:

The well-traveled American generally sizes up Bohemia, the beautiful northern province of the Austrian Empire, as a pleasure resort. Carlsbad, Marienbad, Franzensbad, Johannesbad, Liebwurda, and Teplitz, he understands. He also admires the mountains and the narrow picturesque valleys through which he is hurled along, and has heard something of the Bohemian glass manufactured around Haida and Neuwelt, but even he would be as surprised, as most readers of this article, to learn, that nestled among the mountains and along the streams that furnish water for power, more textile factories exist than are to be found within a similar space in entire Europe, that the common goods produced are to be found distributed among the peasant classes of Europe and the Orient, and that the finer goods, while little known in America, at least as of Bohemian origin, find their way into the courts of Old-World aristocracy.

POPULOUS AND INDUSTRIAL.

In this instance "Austria" means "Bohemia," for outside of Brünn, Moravia, Bielitz and Jägerndorf, Silesia, the entire textile industry is contained not only within the geographical borders of Bohemia, but within the rough and mountainous country of the northern half—the so-called "Deutsch-Böhmen," of which Reichenberg is the commer-

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cial center, its handelskammer, or chamber of commerce, controlling matters as only an Austrian or German or Russian Government institution can do. Imagine this mountain country, with an area of only about 4,800 square miles, containing a population of over 2,000,000, scattered in small towns and villages and clustered around the factories along every good-sized stream, perhaps remote from railroads, and a very good idea of Bohemian industrial conditions is obtained. Reichenberg, with 35,000, is the largest town. There are 10 other towns with from 20,000 to 30,000 population, 21 with from 10,000 to 20,000, 7 with from 5,000 to 10,000, and about 800 dorfs of from 1,000 to 3,000, the remainder being peasants, who not infrequently—father, mother, sons, and daughters—are also operatives in some near-by factory.

COTTON AND OTHER TEXTILE MILLS.

Within this district are 74,548 manufacturing concerns, the textile industry being represented as follows: Preparation of spinning material, 194; spinning and weaving wool and half wool, 363; spinning and weaving cotton, 1,206; linen mills, 483; hosiery factories, 598; yarn refining, 639. In this textile division are 2,000,000 spindles and 77,991 mechanical looms, the majority, of course, in the cotton branch. In the whole of Austria nearly 4,000,000 spindles are in operation, and the annual consumption of cotton is about 100,000 tons, three-fourths of it being American cotton. It will probably be an eye opener to the American manufacturer to state that the total horsepower thus utilized in Deutsch-Böhmen approximates only 216,177. Here enter the elements of cheap labor and the house industry, which it is not within the province of this article to discuss, but against which America's tariff is certainly the only protection. This cheap labor—child, female, male, from 20 to 60 cents per day of twelve hours—is the foundation stone of Bohemia's industries. It enables factories to exist and to multiply, as they have done for hundreds of years and are still doing. Institute here the American wage scale and to-morrow not a single factory could open its doors. How these wageworkers live, what their end, what the fate of their children and their children's children, is another story.

EARLY USE OF FLAX.

Flax naturally started Bohemian textiles. Every peasant raised it; every house had its hand loom, and, as early as the fourteenth century, Bohemian flax-spun linens are recorded as entering the Hamburg market. Every district then, and for a long time afterwards, was controlled by the local count, or "Obrigkeit," who demanded his "Stuhlgeld." This was the day of house industry, an industry which developed greatly notwithstanding the blight of war, because, not being an agricultural country, it furnished both occupation and livelihood for the people. Gradually vereins or associations of weavers were established, each with its meister or chief, who ruled his employees and governed wages and apprentices much as the feudal lords did their retainers around their castles. It is recorded that in 1748 there were in Reichenberg 330 meisters, with, of course, as many guilds. The growing industry attracted Government attention, and various regulations were introduced. In 1796 the number of guilds had increased to 578, producing 20,536 shocks of linen. A foreign market became

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necessary on account of overproduction. Goods were carried out to Berlin and other foreign cities, and early in the eighteenth century one of the leading weavers emigrated to Berlin, establishing there the first concern for the finer fabrics. Not until the nineteenth century were factories, with organized and consolidated labor, established on a large scale, largely supplanting the single-loom house industry. But even now in the Riesengebirge, or Giant Mountains, hand looms may still be seen in operation. The present factories, immense modern concerns producing all grades of goods, but chiefly the cheaper qualities suitable for the common, continental markets, are largely grouped around Rochlitz, Trautenau, Hohenelbe, and Eipel. The spinning concerns number about twenty-five, the weaving about fifty, and the latter understand thoroughly how to utilize cotton admixtures to suit market demands.

INTRODUCTION OF WOOL.

Wool weaving was practically imported into Bohemia from Görlitz and Zittau, German towns near the Saxon border, in the fourteenth century, but it found good soil and soon outstripped its Saxon parent, chiefly because the growing population, deprived of agricultural pursuits, was obliged to adopt industrial methods in order to live. Established first at Friedland, it grew largely under his encouragement. Bohemia was then a kingdom and King Johann also interested himself in the new industry, causing the products to be displayed in the markets of Prague. Simultaneously the industry obtained a foothold in Reichenberg, then the social as it has since become the commercial center of this section. The internecine wars of the period nearly strangled the new as they did all other industries, but all survived and cloth making increased in importance. In 1632 the "Zunft" established a "Meisterhaus" in Reichenberg, but the thirty-years' war again halted development, and in fact almost destroyed all then existing industries, many of the best workmen as well as the "meisters" being driven out of the country and finding lodgment in Saxony. Religious regulations and the ever-increasing taxes levied by the State and local counts were somewhat modified in 1700, and in 1716 Reichenberg led the 58 cloth-producing towns of Bohemia in output. Imperial orders of 1772 and 1775 removed many burdensome restrictions from the industry, and in 1796 some $900,000 of locally manufactured cloth was sold at foreign points. Then Arkwright's machinery invention created a revolution and doomed the house industry. In the period 1796–1803 Johann George Berger and his later partner, Ferd. Rainheld, with imperial sanction, brought in machinery for a complete plant. Others followed, and the 7 plants existing in 1852 grew to 32 in 1900. In the same period the hand looms decreased from 2,000 to 400, while the power looms increased from 56 to 1,800. This revolution was not without friction and affected the other cloth centers such as Kratzau, Friedland, Grottau, and Gablonz, in the same manner, the workmen and women having to accommodate themselves to the change as best they could. Outside of spinning mills and finishing and allied concerns there are now about fifty very large woolen mills in the district.

THE COTTON INDUSTRY.

Cotton became known in 1722. As with wool the industry was for years conducted in the most primitive manner by housework, machin-

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ery not being introduced until the beginning of the nineteenth century. In 1806 Count Clam Gallis established the first cloth factory in Reichenberg, which was sold to the brothers Liebieg in 1828 and is now an immense plant conducted by Joh. Liebieg & Co. During the American civil war twenty-five large concerns failed for lack of cotton and the industry all but perished. In north Bohemia there are now about one hundred large factories. The production of carpets, rugs, velveteens, blankets, silks, ribbons, etc., is considerable and proportionate to the main industry.

CHEAP GRADES OF GOODS.

The bulk of the product in all branches is of a cheap grade, approaching what in America would be called "shoddy." This, however, is not because the finer goods can not be produced, but simply because the market calls continually for cheapness, and no one class of buyers is more insistent upon this quality of cheapness than are the representatives of American department stores, who have the reputation of not looking for quality, but of looking for bargains. At the same time it is singular that the finer woolen fabrics of such firms as the Siegmunds at Friedland or the Trenklers at Reichenberg, which are celebrated in the fashionable markets of Vienna, Berlin, Paris, and London, should find no vogue in American markets—except, perhaps, when they are introduced in the made-up garments of foreign modistes, or imported from England with middlemen's profits added.

ENTERPRISING FIRMS.

In one textile branch, however, Bohemia has a few firms, the artistic excellence of whose products, for years celebrated on the Continent, seems to be just securing recognition in America. As a typical example, the Ginzkey firm, at Maffersdorf, is now working upon special designs for the new homes of some well-known New York people. Ignaz Ginzkey, the founder of this firm, was a gardener and started it with a single carpet loom and jacquard machine in 1843. The firm now employs over 1,500 workmen, and the eldest son, by appointment of the Emperor, is a member of the Herrenhaus, or Austrian senate. While they produce common goods, roll, Brussels, and Axminster carpets for current demand, they also produce the finest of hand-woven rugs, after the most artistic designs. They employ the best designers and their products are works of art. This class of work, however, is done only upon special order and is what the average American housewife would call "Persian." This firm is also a leader in the treatment of its employees—providing library, etc., and encouraging the institution of a cooperative dining hall and general store, something upon the Belgian plan, where the operatives secure the best of everything for the least money, have a voice in the management, and a share in the profits.

INDUSTRIAL EXPOSITION.

Those who are directly interested in the possibilities and advantages of this market ought to make note of the fact that next year, and continuing during the summer, the first general exposition of the various

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industrial products of Deutsch-Böhmen will be given in Reichenberg. The main buildings are already under roof, and here the American buyer or traveler will see for the first time all that is good and noteworthy, not only in textiles but in glass, in the peculiar manufactures of Gablonz, in artificial flowers, and in all the products of an industrially busy people collected in one vast exhibit, whereas heretofore to find them he has been compelled to travel days, or even weeks, in a mountainous section not too well favored with traveling facilities. This exposition will also, from an æsthetic standpoint and perhaps from an architectural, be a novelty and a delight, overlooking as it does the city and valley of Reichenberg, and yet nestled between surrounding mountain ranges.

TRUST AGREEMENT.

AN IMPORTANT DECISION BY THE COURTS.

Consul-General Guenther, of Frankfort, writes that a Vienna correspondent of the Frankfurter Zietung states that trust agreements for the purpose of raising the price of goods to the detriment of the public are illegal under the Austrian coalition law. The correspondent states:

An important decision of the supreme court at Vienna establishes now the application of this paragraph with reference to trust agreements of Austrian with foreign industries. Occasion for this decision was given through the suit of the Vienna factory of electric lamps "watt" against the sales depot of the associated manufacturers of electric lamps at Berlin, the electric company "Siemens & Halske," and the General Electric Company, in order to test the legality of the agreements of the International Syndicate for electric lamps. The commercial court at Vienna dismissed the suit for the reason that the agreements entered into at Berlin can only be judged according to German law. The appellate court dismissed the case also upon the ground that the increase in price is justified by the improvement of the quality of the lamps.

In spite of these decisions the Austrian supreme court has ordered a new trial. It was held that even where an agreement is made in a foreign country, the Austrian citizen must obey the provisions of the Austrian coalition law. Even if the increase in price is based upon an improvement in quality, the court must take into account whether the increase in price, in spite of the better quality, is not prejudicial to people of lesser means. Therefore for the large majority of the population, who would be satisfied with an inferior quality, and can not well pay the increased price for these goods, it must be proven that the improvement was so great that the higher price was fully justified, and that the public appears not to be harmed in any manner.

PRODUCTION OF BEER.

Consul Ledoux, of Prague, furnishes the following statistics regarding the production of beer in Austria for the past two years:

The statistics for the brewing season 1904–5—September 1, 1904, to August 31, 1905—as compared with the season 1903–4, show a marked

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reduction in both production and Government revenue. The cause of the decrease in production is ascribed chiefly to an increase in the beer tax, causing a proportionate advance in the price of beer and checking consumption. The total production in Austria for the season 1903–4 was 523,274,400 gallons. The total production for the season 1904–5 was only 504,187,200 gallons, showing a decrease of 19,087,200 gallons, or of about 4 per cent. The total amount of beer tax collected for the season 1903–4 amounted to $15,134,800, while that for the season 1904–5 amounted to only $14,604,400, showing a decrease in revenue of $530,400.

ARMS FOR GREECE.

Consul Brittain, of Kehl, reports that according to recent articles in the German newpapers, which quote direct reports from Greece, the Grecian minister of war, Mr. Buduris, has recently signed a contract with the Arms Manufacturing Company, of Austria, through which that company accepts the obligation to supply the Grecian Government with 60,000 guns, and that within two years, at a price of 79 francs ($15.25) in gold per gun. Within the first year 30,000 guns are to be delivered, and another installment of 30,000 guns during the second year. The Grecian Government will make an immediate payment of 700,000 francs ($135,100) as the first installment. The total sum involved amounts to 4,740,000 francs in gold ($914,820). The company also binds itself to deliver an extra installment of 40,000 guns at the above-named price provided that the Grecian Government presents the order, at the latest, during the year 1908; otherwise the company reserves the right to dictate the price at which it will sell or make contract for. The Grecian press expresses great satisfaction that the war department has finally solved the matter and that the Grecian army will now be supplied with modern weapons.

VIEW OF OUR CHEMICAL INDUSTRY.

According to Consul-General Guenther, of Frankfort, Dr. Paul Kohn, who was a delegate from the Austrian department of commerce to the World's Fair at St. Louis, and a member of the international jury, has written an essay on the chemical industry in the United States with particular reference to the scientific education for the same. He says, in conclusion, that as in every other industrial branch the United States has also made the most rapid progress in chemical industry and has made good use of the experience of Europe. Aided by the tremendous wealth of raw materials, a free form of Government, and American energy it has developed marvelously, but one thing is lacking, i. e., the close connection between science and practice, which is especially existing in Germany. But the desire to study German methods is becoming very apparent in the United States and it will have the result that in the markets of the world in the chemical industry, in which now England, France, and Germany have the lead, a change in favor of the United States will take place.

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TURKEY.

ROOM FOR AMERICAN TRADE.

MANUFACTURED PRODUCTS THAT SELL—LOCAL CONDITIONS SHOULD BE STUDIED.

In response to letters from the managers of the American Floating Exposition, Consul Norton, of Smyrna, writes that if this project is carried out on the lines indicated by the company the results obtained would be helpful to American commerce in that section. He thinks it would be next best to a diversified permanent exhibit, such as European countries have established in leading trade centers, notably Constantinople. At the request of the consul, a large importer of American goods prepared a detailed statement concerning articles adapted to the Smyrna market and the outlook for trade. This letter has general interest, and follows:

There is in Turkey, and especially in Smyrna, the largest commercial port in Asia Minor, plenty of room for American trade. Though efforts have been made to increase the sale of American articles in this section, native merchants who take a certain interest in the development of American relations have found little support from American manufacturers and export houses, so that American trade with Smyrna has remained practically stationary. Turkey could be, without question, one of the very best clients of America; but to secure this American manufacturers must pay attention to inquiries coming from this quarter. In consideration of the fact that traders and consumers here are almost invariably natives, American houses must take especial care that goods sent here are prepared and finished to suit the local tastes and requirements. One of the greatest hindrances to the development of American importations into Turkey is the continual refusal of American manufacturers to supply their representatives with sufficient samples.

KNOWLEDGE OF LOCAL CONDITIONS IMPORTANT.

The proposed American Floating Exposition will be mostly appreciated here as fully showing what American industry can offer. Such an exposition will give full satisfaction provided that it be properly arranged and displays such goods as are easily salable here. It is of prime importance that those in charge of individual exhibits have the necessary knowledge not only to effectively display their samples, but also to furnish any information required by local merchants. It is also of importance to give prices, c. i. f. Smyrna, and offer facilities in regard to payments. This latter is a very important factor in establishing commercial relations with this market on a large scale. Germans, as well as Austrians, who have a large trade with Smyrna, offer great facilities in regard to payments. English exporters, who previously dealt exclusively on a cash basis, have also begun to extend their credits during the past year. American manufacturers must, of course, be very careful with credits. Many native merchants engaged in the import trade are inclined to be slow in paying, and are not over hon-

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orable in their dealings. Nevertheless there are many houses of very good standing, able to give full satisfaction in meeting their financial obligations, with whom American firms will never run any risk even by giving credit. American representatives accompanying the exposition must, of course, be very careful in appointing agents here, and should secure in advance all necessary information, in order to make a proper selection and protect their principals from losing money in the matter of credits. It is of importance that those in charge of the exposition should use French easily. They should also supply interested parties with catalogues in that language.

The stay of the exposition steamer in Smyrna must be long enough to allow merchants to examine thoroughly the different goods on exhibit. A sojourn of at least one week must be allowed Smyrna. Orientals are slow in their dealings, and no satisfactory result can be expected here if the stay is too brief.

PRODUCTS THAT WOULD SELL.

As a general rule for the market of Smyrna, cheapness rather than quality is appreciated, as the population is rather poor and can not afford to pay for higher grade goods. The following is a list of such wares as sell most easily in this section:

Agricultural implements: Plows, cultivators, harrows, seeders, mowers, reapers, binders, rakes, plowing engine outfits, thrashing outfits, and many other farming tools and implements.

Alcohol: Usually imported with a strength of 40° from Russia, Austria, and other European countries.

Ammunition: Hunting rifles, of cheap but showy make.

Aniline colors: Now imported exclusively from Germany.

Art metal goods: In cheap grades.

Bacon.

Bedsteads: In iron and brass with high posts.

Beer: Beer in barrels imported from Austria; the import in bottles is limited, but some business can be done with a good, cheap bottled beer.

Bells: For doors, rooms, and the table.

Bicycles and parts: In competition with Germany and France.

Biscuits: In competition with England. Huntley & Palmer's mark is the best known.

Blankets: Cotton and woolen in cheap grades, with showy patterns.

Boots and shoes: Tasty and cheap shoes for men and women.

Brushes: Of all sizes, for all purposes.

Butterine.

Canned goods: Meats, pickles, and fruits, packed in tins and glass jars. Now imported from England, Germany, Austria, and Italy.

Carriages and parts: Perambulators.

Cement: In competition with France, from whence the Rochefort, Vicat, and Portland grades are imported in large quantities.

Chains: Jack and safety chains in different sizes, watch and neck chains, gold filled and plated.

Chairs: In different sizes; now imported from Austria.

Chemicals: In competition with Germany.

Chimneys: For lamps; in competition with Austria.

Chinaware: In competition with Austria and Germany.

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Chocolate: In competition with Germany, France, Switzerland, and Italy.
Copper: In sheets; now imported largely from England.
Cordage: Jute, manila, and wire.
Corsets: In cheap grades.

COTTON GOODS, HARDWARE, ETC.

Cotton goods: Such as cheviots, doeskins, drills, ducks, flannels, ginghams, prints, sheetings, shirtings, twills, and mercerized sateens; also cotton yarn in competition with England and Italy.
Crayons: In competition with Germany.
Curtain fixtures: For windows and doors.
Cutlery: In competition with Germany and England.
Desks: Flat and roll top.
Doors, sashes, blinds, windows: Made of yellow pitch pine.
Engines: For gas and kerosene.
Faucets: Brass, iron, and wooden.
Filters: For water and oil.
Flour: Wheat and corn; also corn starch.
Furniture: Kitchen, office, parlor.
Glass: For windows; general glassware.
Glucose: 43°, 44°, and 45°. In competition with Germany.
Hardware: Builders' carriage, and household; now imported generally from Germany in the cheapest qualities. Good grades have a limited sale, and are imported from England and France.
Inks: Lithographic, printing, copying, typewriting, and writing.
Iron: In bars, sheets, rails, columns, bands.
Jewelry: Gold and gold plated.
Knobs: For doors; in porcelain, metal, and brass.
Lamps: For gas and kerosene.
Leather: Calf, colt, glazed kid, sole leather for shoes, belting leather. Now imported from France and Germany.
Linoleum: Imported from Germany and England.
Lumber: Yellow pine is now imported from America; white pine from Austria in large quantities.

MACHINERY, PAPER, STOVES, ETC.

Machinery: Flour mill, mining, laundry, small ice making, grain cleaning, door, sash, and blind, cotton gin, box making, etc. Simple machines of small dimensions are chiefly in demand.
Meats: Canned.
Milk: Condensed, now imported from Switzerland.
Mirrors: Plate glass, now imported from Belgium.
Nails: Wire.
Novelties: In jewelry, leather, metal, silverware, paper, rubber, and wood; all in cheap, showy grades.
Oil: Lubricating, mineral, grease, linseed, and oleo oils.
Oilcloth: For carriages, floors, and tables.
Paints and colors: In cheap qualities, especially in powder.
Paper: Blotting, cigarette, enameled, fireproof, linen, manila, photographic, printing, toilet, waterproof, writing papers; now imported from Austria. There is keen competition in these lines.

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Paraffin: Formerly imported from the United States, now from Hungary.

Pens: Steel, now imported from England and Germany.

Pianos and organs: Imported from Germany.

Piping: For water and gas, imported from Germany, Belgium, and England.

Pumps: For water and for artesian wells.

Tacks: For carpets and shoes, now imported from England and Germany.

Watches: Nickel, metal, silver, gold, now imported from Switzerland and Germany.

Safes: Key lock.

Shears and scissors: Common shears are largely imported from Germany. Fine qualities are imported from England, in limited quantities.

Rubber shoes: Imported from America by the United States Rubber Company. The preferred brands are the "Candee" and "American."

Soaps: For toilet, perfumed and fancy; cheap grades largely imported from Germany. Fine qualities are imported from France. American soaps have recently appeared on the market.

Stoves: For coal and wood; now imported from Germany. Oil stoves have been imported from America. The best known brand is the "Ideal" (Barler Manufacturing Company).

Tools: For farm and garden; jewelers', miners', stonecutters', tinsmiths', blacksmiths' tools; files, saws.

Twine: Cotton, hemp, and linen.

Wheels and parts: For cars and carriages.

It is well to note that the import of the following goods is prohibited: Gunpowder, loaded cartridges, revolvers and rifles (except sporting guns), salt; all explosive materials (including saltpeter and potassium chlorate); electrical apparatus and machinery connected with the same.

NEW BRIDGE FOR THE GOLDEN HORN.

Consul-General Dickinson, of Constantinople, reports that the order for the building of the new Galata bridge across the Golden Horn, for which American firms were active bidders, has been secured by the firm of Schneider & Co., owners of the famous Creusot Works in France. The contract, however, is held in suspense owing to a difference in regard to the cost of the bridge. In consideration of a recent loan obtained from France the Turkish Government agreed to appropriate the sum of $2,640,000 to pay for the new bridge, torpedo gunboats and armaments, and it was expressly stipulated in the agreement that these were to be ordered in France. Out of this appropriation $2,112,000 is to be expended in armaments and ships, leaving a balance of $528,000 to pay for the Galata bridge. The French engineers had practically closed the contract at this figure, when, upon further examination, they found that it would be impossible to build the bridge at that price. They are willing to do the work for an extra $76,000, and the Imperial Government has accepted this extra allowance, but refuses to have it taken out of the loan or furnish security for its payment.

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GREECE.

RICH IN MINERALS.

CRISIS IN THE MINING INDUSTRY.

Secretary Wilson, of Athens, reports a movement in Greece to exploit that Kingdom's mineral resources. He says:

Greece might easily become an important mineral-producing country, for it contains considerable mineral wealth in silver-bearing lead, zinc, copper, manganese, iron, emery, sulphur, and lignite, besides marble of many varieties. From 1861 to 1875 the Greek Government granted about 400 mining concessions, comprising an area of 190,000 hectares. Thirty stock companies were started to develop these concessions, but by 1896 only four of them still existed, viz, the French Laurium Company, the Greek Laurium Company, and the companies of Dardeza and Seriphos. By 1904 four more companies were started—the Greek Mining Company and the companies of Locrida, Atlanti, and Capsalo.

FINANCIAL SITUATION.

The fall in the value of the stock of these two most important companies of the Greek and French Laurium companies between the two above dates shows the serious crisis through which the Greek mining industry is passing. At the end of 1896 the 100,000 shares of 140 drachmas par value of the Greek Laurium Company were quoted at 93.50 drachmas, and at the end of 1904 they had fallen to 75 drachmas. In 1896 there was a dividend of 8 drachmas, and in 1904 no dividend was declared. The 32,600 shares of 500 francs par value of the French Laurium Company were worth 628 francs in 1896 and only 320.58 in 1904. In 1896 there was a dividend of 40 francs and in 1904 of only 20 francs.

WORKING THE MINES.

These two companies extract especially the silver-bearing lead which is found about Laurium. The Greek company obtains this metal from the scoriæ or refuse from the mines worked by the ancient Greeks. This material contains only about 3.50 per cent of silver-bearing lead, but the production amounts to about 7,000 tons annually, valued at 3,500,000 francs. This lead is sent directly to Marseille, where it is smelted and the metals separated. The French Laurium Company works the mines directly, and in 1903 produced 213,788 tons of metal, divided as follows: Lead, 72,594 tons; manganese iron ore, 60,071 tons; sulphur products, 42,380 tons; zinc, 28,292 tons; and various metals, 10,451 tons. All these minerals are treated at Laurium and are then exported for further treatment. The returns for the whole Laurium district for the year 1904 show a total production of 424,246 tons, of which 309,240 tons were from the surface works. This material was dressed by washing machinery and reduced to 202,826 tons, out of which the foundries have yielded 15,186 tons of silver pig lead containing from 1,648 to 1,851 grams of silver.

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VALUE OF MINERALS EXPORTED.

The following table shows the value of minerals exported to various foreign countries:

Country.	1902.	1903.	1904.
England	£122,138	£89,570	£94,022
Belgium	270,201	216,611	294,523
France	108,545	105,705	97,984
Holland	65,636	39,981	15,677
Germany	17,140	16,000	9,000
Austria	4,040	2,240	1,960
Total	587,700	470,107	513,166

The Greek Laurium Company owns most of the stock of the railway from Athens to Laurium, which is a source of profit to the company, and the French Laurium Company has interests in the mines of Dardeza, Capsalo, and Seriphos, which are also worked with some profit. The principal cause of the hard times through which these two companies are passing is due to the falling rate of exchange in Greece. In 1902 the franc was worth 1.62 drachmas; in 1903, 1.58 drachmas; in 1904, 1.38 drachmas, and now about 1.20 drachmas. As these companies sell their products for gold, while their ordinary running expenses are paid in drachmas, the loss is considerable from this cause, for in 1902 1,000 francs in gold was worth 1,620 drachmas in Greece, while now it is worth only 1,200 drachmas. It would appear, therefore, that the Greek mines, which in 1904 exported 19,200,000 francs worth of minerals as against 17,400,000 in 1896, would not be in their present unfavorable condition if the exchange had not dropped by about 23 per cent.

DEPOSITS IN ZEA.

Besides the Laurium mines, there are in the island of Zea iron, lead, and manganese deposits. But little work is done, however, as these mines are not close to the sea and transportation is difficult. In the island of Thermia there are iron mines which from 1896 to 1903 produced 148,150 tons of ore. In the island of Euboea there are coal mines the product of which is sent almost entirely to Laurium for the smelting furnaces. In 1899 the international financial commission, to which the revenues derived from the sale of Naxos emery had been assigned, established a depot at Syra. This has been of advantage both to the Government and to the shippers of emery, for formerly steamers were obliged to receive their cargoes while lying in the open roadstead before Naxos, while now this is done in the harbor of Syra. The sale of Naxos emery in 1904 was 6,353 tons.

Of this quantity, 2,780 tons were shipped to Rotterdam, 1,203 tons to New York, 1,050 tons to Havre, 920 tons to Liverpool, and 400 tons to Philadelphia. The exportation for 1904 was the largest for several years and exceeded that of the previous year by 540 tons.

MARBLE.

One of the most important exports is marble. A British company has acquired most of the important marble quarries, including those

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of Naxos, Paros, and Antiparos, from which the fine white marble for sculpture is obtained. This company sent to foreign markets in 1904 1,073,654 cubic meters of different marbles. In addition to the export there is a good market in the country for white marble (not of the first quality) and the blue Melana marble, of Pentelicus, for building purposes. The company has great hopes of developing the market in the United States, where the demand for Greek marble is increasing. At present the company is at a distinct disadvantage in the matter of transport, as the ships at Piraeus can not come to the docks and have to be loaded from lighters. This adds to the expenses of the company.

THE CURRANT TRADE.

INCREASE IN EXPORTATION FROM GREECE.

Vice-Consul Lontos, of Patras, furnishes the following table, which shows the quantity of currants exported from Greece for the crop year of 1904–5 compared with that of the preceding year:

Country.	Crop, 1904–5.	Crop, 1903–4.	Country.	Crop, 1904–5.	Crop, 1903–4.
	Tons.	*Tons.*		*Tons.*	*Tons.*
United Kingdom	64,591	67,599	Holland	32,959	26,680
United States	20,904	19,058	Germany	10,462	6,934
Canada	1,590	2,141	Austria	2,307	1,765
Australia	6,832	4,904	Other countries	283	215
France	644	4,577			
Belgium	447	712	Total	141,019	134,585

The above figures show gross weight, from which a tare of from 12 to 13 per cent ought to be deducted in order to arrive at net weights. Net weights will thus be found to come up to about 122,500 tons—equal to 260,000,000 pounds—as against 248,000,000 pounds last year, which shows an increase over 1903–4 exports by 6,434 tons (gross weight). This increase is to be attributed to the heavy shipments made in anticipation of advancing prices by the adoption of the newly enacted convention, which, however, is far from being the case so far.

GOVERNMENT MONOPOLY.

Mr. Charles S. Wilson, secretary of legation at Athens, reports that the company formed some months ago, which obtained from the Greek Government the monopoly of the growing and trade in dried currants, upon taking over the stock of the former companies, found about 98,000,000 liters of currants in its storehouses, and at the end of this year that amount will be almost doubled. In order to utilize this large supply the company is making experiments in feeding animals with the product after it has been kneaded and made into molds. The company is also about to import a number of automobiles into Greece to be used as public conveyances. The motive power of these machines is to be alcohol extracted from currants. The same alcohol will be used for lighting purposes, and the company is now trying to introduce lamps which burn alcohol. It is hoped, on account of its price that alcohol will largely replace petroleum, which is very expensive in Greece.

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THE ORIENT.

THE CHINESE EMPIRE.

POPULAR STYLES AND PRICES OF VEHICLES—ROOM FOR AMERICAN BUILDERS.

The following letter from Special Agent Burrill, written from Shanghai, describes the kind of carriages that are used in China. Mr. Burrill discusses the several classes of vehicles used with such detail that the information furnished should be valuable to our manufacturers. The general belief among dealers is that a two-horse trap and a light runabout, similar to those extensively used in this country, would command ready sale. Illustrations of the different kinds of vehicles described were furnished by the special agent and are on file with the Bureau of Manufactures. Mr. Burrill writes:

Carriages and bicycles are used extensively in Shanghai by both foreigners and natives, while automobiles, to which reference was made in a previous report, are beginning to be introduced among those who can afford the luxury. The roads under the control of the foreign settlements are well adapted to comfortable and rapid driving, and in the absence of street railroads this mode of locomotion is utilized not only for pleasure, but because of business necessity or convenience. The carriages most popular in Shanghai are the victorias and broughams, both heavy vehicles, but apparently easily drawn by the hardy little Chinese ponies, which greatly outnumber the Australian horses imported for this purpose. The victoria is a low-standing vehicle, with a comfortable seat behind capable of accommodating two persons, and a small seat in front, both of which are in the body of the vehicle. On the driver's seat there is room for the driver himself and the footman. The spokes, rims, hubs, and shafts are imported from the United States, while the leather, ironwork, and steel come from England, from which country, it is declared, they can be obtained cheaper. These parts are all imported separately, because in this way a large saving is made in freight charges. The box is manufactured and the parts are put together here by native workmen, and the completed vehicle is sold to foreigners and natives at what would be regarded as a high price at home, taking into consideration the initial cost, freight charges, and workmanship.

NO COMPETITION.

The retail price of a victoria on this market is, fitted with the iron tire, approximately 500 Shanghai taels, or, figured at 67¼ cents as the rate of exchange, $336.25 in American money; fitted with the ordinary rubber tire, $403.50, and fitted with the cup-wired rubber tire, $435.50. This style of carriage has no competition here for the reason that there has apparently been no effort made toward the introduction of a lighter, less cumbersome, and possibly less expensive vehicle.

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If the American manufacturer could export to China a low-wheeled surrey, built to fit a Chinese pony of 13 to 13.2 hands high and lay it down here at a price that could compete with the heavier victoria, it is reasonable to assume that a satisfactory market could be established. Because of the narrow streets the cut under should always be used to facilitate turning, and if after an investigation of the conditions obtaining here an American carriage manufacturer should decide to introduce his goods, he should never lose sight of the necessity for a vehicle so constructed as to make a short turn.

BROUGHAMS AND DOGCARTS.

The broughams are used extensively by the natives, and but few well-equipped stables belonging to foreigners are without them. Not only are the rains in China of sufficiently frequent occurrence to make a closed carriage desirable, but the well-known desire of the Chinese for seclusion and immunity from observation both tend to popularize this type of vehicle. The straight-cut brougham, with iron tires, retails for approximately $353, while the same vehicle, with rubber tires, brings about $450 in round numbers. The circular-front brougham, with a seat for a third person in the body of the vehicle, sells, with rubber-tired wheels, for approximately $500 in United States money. There is only a small demand for iron tires on vehicles of this description, but they sell for about $400 gold.

The dogcart has a limited sale in Shanghai, and it is doubtful if the market could be enlarged. It is universally used in this part of China. With an iron tire this cart is sold at retail for about $250 gold; fitted with rubber tires its price is approximately $285 in American money. For the gig, a two-wheel covered vehicle, there is even a smaller demand than for the dogcart. The gig sells, with an iron tire, for about $250 gold and for approximately $285 in American money when fitted with a rubber tire.

VEHICLES THAT MIGHT BE INTRODUCED.

In Shanghai there are a few carriage manufactories owned and operated by natives. From these factories carriages can be purchased at a slight reduction from the prices quoted above, which are those charged by factories owned by foreigners and operated under foreign supervision. Dealers here express the belief that there is room on this market for what is known as a 2-horse trap, built with a high seat in front, accommodating two persons, and with the customary seat behind. As this would be an expensive equipage and within the reach (financially) of comparatively few, it is doubtful that even under the most favorable conditions more than two hundred or three hundred could be sold, and this is a liberal estimate.

Dealers generally agree that a light runabout similar to those manfactured and used so extensively in the United States would command a ready sale here. A vehicle of this type, according to their idea, should be lightly but substantially constructed, having the customary and necessary cut under. The wheels should be low, of uniform size, and fitted with either iron or rubber tires. The latter, although more expensive, would doubtless be preferred. It should contain one comfortable seat, covered with corduroy or some other durable and attractive material, and the lamps, which are required on all vehicles

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in China, should be of the smaller-sized American type. A vehicle of this description could be drawn by the Chinese ponies with comparatively small effort and it would be serviceable either for business or for pleasure.

PACKING AND TRANSPORTATION.

Considering the size and weight of a runabout of this kind it would seem practicable, from the view point of both safety and cost, to ship the entire vehicle in one package, as four of them would not constitute more than 1 ton measurement. A strong crate or box should be made to fit the shafts and box. The wheels and all other parts should be packed separately and with great care, using plenty of excelsior, heavy paper, gunny cloth, and other material essential to safety in transportation. By thus carefully protecting each part the danger of damage en route would be reduced to a minimum and the complete runabout, secure in its box, could be landed here and put together with no loss of time and at comparatively small expense.

If on investigation the American manufacturer should satisfy himself that the runabout could be introduced extensively in Shanghai, it would not be difficult to determine the cost of laying down the first consignment and to figure out the probable profit on each sale. The proposition seems well worthy of attention in the United States, but it is only feasible through the exhibition of this particular type of vehicle on the streets of Shanghai. Its introduction could be accomplished only through what the Chinese appropriately term and usually demand "a look-see," for its construction and general appearance would be dissimilar to what they and most of the foreigners in this city have been accustomed. Such information as would be essential for the American manufacturer successfully to place the runabout on this market could be secured from his trade connections in Shanghai or, should he not be in touch with the business interests here, he could communicate with the general manager of the Shanghai Horse Bazaar Company (Limited), from whom could be obtained all necessary detail.

COPPER COINS.

UNRESTRICTED COINAGE THREATENS DEBASEMENT OF THE CURRENCY.

Special Agent Burrill makes the following informative report on the increase in importation of copper into China and its use by the mints in conversion into 1-cent pieces and "cash:"

The enormous increase in the importation of copper into China recently is due to its unrestricted coinage into 1-cent pieces and cash, which operation is virtually under the absolute control of the provincial authorities. While the multiplicity of mints threatens the debasement of the currency of the Empire, the Central Government leaves the question of production entirely to the viceroys of the provinces. As these officials realize a comfortable margin of profit on the coinage, business men here assume that there is no likelihood of its early cessation, and that the extensive copper importation will continue. The Shanghai Chamber of Commerce has investigated this question and has informed the diplomatic corps at Peking that representations looking to the regulation of currency should be made to the Government. The chamber

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pointed out that as the Chinese provincial governments imagine they have a perennial source of income from the profit of the mints, they may fail to grasp the dangers of depreciation because of overissue. It was further suggested that if restrictions be not established, foreign trade in China must inevitably suffer.

ESTIMATED OUTPUT OF COPPER PIECES.

In the report on the trade of China and abstract of statistics it is estimated that the output for 1904 approximated 1,745,000,000 of copper pieces, and the chamber of commerce declares that by 1906, when all the mints, new and old, are in operation the output will reach in round numbers 16,413,000,000 pieces. There are eighteen or nineteen mints now in operation in China, but although bankers and merchants have given the subject close study, they find it extremely difficult to obtain through unofficial channels absolutely accurate information as to the present producing power of the various mints established. These conditions indicate a growing demand in China, and it is estimated that the United States now exports to this country practically one-half of all the copper that is used. The American 99.6 electrolytic copper is popular here because it can be worked to advantage in the mints, and as their purchases about cover the entire importation it is apparent that the only way to increase the demand for American copper is to decrease the price. Australian copper, sold through British and German syndicates and metal exchanges, is also largely represented on this market. The "Wallaroo," mined in Australia, is regarded here as one of the best produced in the world because of its purity, but for the purposes of the Chinese the best American electrolytic copper is fully as desirable.

IMPORTATION OF DISKS PROHIBITED.

The importation of copper disks or blanks, the same size as the coins themselves, has been prohibited by the Chinese Government for the reason that individuals brought them in and, by using a home-made stamp, more or less crude, but nevertheless effective, established a lucrative industry. These coins circulated freely in the interior, and the authorities found it essential to suppress the competition. The customs authorities will, however, admit copper disks through the custom-house for delivery to Government mints on an order from Peking. Such disks are now made in England, Germany, and Japan, and are said to be more profitable for export than ingots. There is also a demand for copper strips 2½ to 3 inches wide, of the same thickness as the coin. These strips are stamped at the mints and placed in circulation, saving time and decreasing somewhat the expense of coinage.

METHOD OF SHIPPING.

The United States and other copper-exporting nations have adopted the custom of shipping the long ingots, which is regarded as far more satisfactory, as it prevents pilfering en route and also guards against short weight. This change in the method of shipment was brought about by the trouble experienced in importing the short ingots in such condition that they would arrive at their destination without loss

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to either the exporter or the importer. The customs duty on copper is 1.175 haikwan taels per picul, or approximately 88 cents in American money, figured at $1 gold as the equivalent of 1.34 haikwan taels, the rate for November. Duty on copper is rarely paid in China, however, as it is used for Government purposes and may be imported free on the pass of the taotai of Shanghai, whose position is similar to that of the mayor of an American city. For the purposes of such free importation authority has been delegated to this official by the Peking Government. Copper is bought in this market on a c. i. f. and c. basis; that is, its price laid down in Shanghai must include cost, freight, insurance, and commission. With the charges for transshipment into the interior the exporter need have no concern.

In view of the enormous demand for copper, which it seems probable will continue for several years unless unexpected restrictions on coinage should be imposed, it would appear advisable for American copper men more carefully to investigate the conditions than they perhaps have up to the present time. This information can be obtained either through trusted representatives in China or by sending out an expert, and it is believed here that the results would justify the outlay in tme and expense.

COPPER MINTS.

RESULTS OF THEIR ESTABLISHMENT ON MONEY VALUES.

Vice-Consul Cloud writes from Hangchau as follows, regarding the establishment of mints in China for making copper coins:

The predictions made more than a year ago by students of affairs in China as to the ultimate results that the wholesale establishment of mints for copper coinage would have on money values are being rapidly fulfilled. Already several viceroys and governors of the Empire have issued proclamations forbidding the importation of these copper coins into their respective provinces. Nevertheless the various provincial mints continue to run at full blast, turning out millions of these cheap coins every twenty-four hours, and forcing the people to accept them. In Hangchau there are two such mints, and the daily output is something like 1½ millions of copper coins. These coins are nominally worth 10 cash. One year ago they were sold by the mints at the rate of 90 coins to one Mexican dollar. At present, however, the same coins can be bought at the rate of 98 to 105 for one Mexican dollar. The best of these coins, while selling normally for 10 cash each, are intrinsically worth only 6 to 6½ cash, while there is a huge quantity being forced into circulation by the provincial authorities through local banks that are worth only 3 to 5 cash each. A new mint established in Hangchau last May has been for five months past dumping coins of this latter kind upon the merchants of the city at the rate of 200,000 per diem.

The results of this sudden inflation of the circulating medium have been (1) to drive the old genuine copper cash almost entirely out of circulation; (2) to raise the price of nearly all kinds of food stuffs and of fuel; (3) to cheapen the copper coins themselves, owing to their plentitude, and (4) to arouse general discontent among the masses of the people.

The old copper cash, although grimy, bulky, and inconvenient to handle, has been the circulating medium among the Chinese for all

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minor business transactions for many hundreds of years, and to which the people are greatly attached. These old coins represent real value—many of them being composed of pure copper, and some even containing a little gold. And as a vast majority of the articles used in every-day life are bought for a few cash each, oftentimes for less than 10 cash, it is obvious that to replace these old coins with coins of no less than 10 cash value would not only cause the poorer classes great inconvenience, but in a multitude of cases an actual loss.

SALT INDUSTRY.

METHODS EMPLOYED IN MANUFACTURE.

Consul-General Ragsdale, of Tientsin, describes the methods of making salt along the northern coast of China, and furnishes figures showing cost of production and retail prices. The methods followed are antiquated, and in consequence, the consul-general says, many tons of impure salt are annually placed on the market. It would seem the salt-making section of China presents a good field for the introduction of modern machinery. The consul-general writes:

Many tons of impure salt are made each year at different points on the coast of north China, extending from Tongku to Shanhaikuan and Nieuchwang. The methods employed are the same in each place, and the same have been in use certainly from the time of Marco Polo's famous journey through eastern China. The salt is made by the evaporation of sea water. The water is pumped into the evaporating basins by wind power and evaporated by the heat of the sun. Extending many miles each way from Tongku the coast is nearly level and only a few inches or feet above high tide. On this flat coast are the salt works. The evaporating basins are made on the flats and have much the appearance of innumerable tennis courts of great size. They are separated from each other by small ridges of mud about 8 inches high. The bottom of the basins are made level and hard-rolled with a stone roller. The basins are filled to a depth of 3 inches with sea water, which is evaporated by the heat of the sun in from one to three days, leaving a coating of salt on the bottom. This is carefully scraped into a pile, and after rerolling the bottom more water is pumped in. These basins are located about 2 feet above tide level and in groups, so as to be served by a central pump. The flats are cut in all directions by small canals, giving each group water connection with the main salt yards at the railway station or the river. The salt as fast as it is made is shoveled into small boats, which are punted through the canals to the main yards, where it is thrown into great heaps and covered with mats, waiting to be sold and packed for the Tientsin market.

USE OF WINDMILLS.

The windmills used for pumping the salt water into the basins are most ingenious and of a type met with only in China, as far as the writer knows. There is a light hexagonal wooden frame fastened to a central post. On this frame are set six small sails of cotton cloth with the booms so fastened as to allow them to swing out at an angle of about 45 degrees.

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To the bottom of the post is attached a horizontal cog wheel which fits into the vertical cogs of a horizontal shaft. The outer end of this shaft works the pump.

The pump is of the disk type. There is an endless chain, on which are vertical wooden disks about 5 by 9 inches, and 9 inches apart. These disks run in a rectangular wooden trough, 9 inches wide and 5 inches deep, open at both ends. The lower end of the trough is submerged in the salt water and the upper end is above the small ditches which supply the evaporating basins. This trough may be 10 to 20 feet in length, depending upon the height to which the water is to be raised, and usually has a slope of about 20 degrees with the horizontal. At the upper end of the trough the disk chain passes around the horizontal shaft from the windmill, and this shaft is provided with sprockets which fit between the disks.

With the revolution of the windmill the shaft revolves and the chain with the disks travels up the trough, each disk pushing its complement of water to the top, where it falls into the small ditches and runs off to one or the other of the many evaporating basins. The amount of water pumped depends, of course, upon the speed of the windmill, and is from 1,000 to 5,000 gallons per hour. These mills are erected in groups of three (a small plant) or five (a large plant), and there are about 250 mills which feed the collection depots near Tongku.

The mills turn out about 700 tons of salt per mill per year. They can not be operated during rainy or freezing weather and are consequently idle more than half the time. The windmills and pumps are constructed entirely of wood and their action is automatic. They require but little attention and can be repaired by the cooly in charge. About one cooly per mill is sufficient for all the work required in making the salt.

The making and selling of salt is a Government monopoly and a most valuable one. The position of salt taotai of Tientsin is one of the most lucrative Government positions in China. The groups of mills belong to individuals who have purchased a Goverment permit for their erection. All the salt made must be delivered to the Government collecting stations, for which the maker receives a price just sufficient to keep him at work—about $2 Mexican per ton delivered. At the depot the salt is packed in baskets and mats and well corded, each package weighing about 500 pounds. The cost of this packing is $1 Mexican per ton.

TRANSPORTATION AND FREIGHT CHARGES.

The freight charges from Tongku to Tientsin is somewhat less by river than by the railway, but is about $1 Mexican per ton. When the cuttings being made in the river are completed, the distance between Tientsin and Tongku will be reduced from 51 miles to 31 miles. The distance by railway is 27 miles. At Tientsin the salt is repacked in packages of 550 pounds for consumption in the Province of Chihli and 800 pounds for the Province of Honan. The cost of this repacking is $4 Mexican per ton. The transportation in Tientsin to the shops is $1 Mexican per ton, making a total of $9 per ton. To this amount must be added the native customs tax of $25 per ton, and we have the cost of the salt to the wholesale dealers in Tientsin $34 per

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ton, exclusive of what these dealers have to pay the Government for their licenses and any Government squeeze. There are in Tientsin four large salt depots for local consumption, which handle about 100 tons per month each. These four depots have the monopoly for Tientsin, and at what price they sell the salt to the retail merchant I do not know. The retail price in Tientsin to the consumer is 3.75 cents Mexican per pound, or $75 per ton. Of the annual salt production in the Tongku region about 80,000 tons are consumed in the Province of Chihli and 76,000 tons in the Province of Honan.

COST AND RETAIL PRICES.

Following north along the coast there is considerable salt made at the towns of Lanchow, Changli, and Shanhaikuan. Up to about two years ago there was no Government tax on this salt. The producers sold direct in any quantity and the salt was not packed. The producers had only to square things with the local magistrates, which was a matter of personal arrangement. Ten years ago the retail price of salt at Lanchow was one-eighth of a Mexican cent per pound. Two years ago his excellency the Viceroy Yuan Shih Kai sold all these northern salt privileges to a Chinese official. Since then the amount of salt produced has increased and the retail price is now the same as in Tientsin, 3¾ cents per pound. The prices herein given are approximate only as they vary from time to time in accordance with the demand, and also in accordance with the rate of exchange between copper cash and silver. The following table shows the cost at Tientsin and the selling price:

	Per ton.
Price at salt piles in Tongku	$2.00
Packing, including mats and ropes	1.00
Tongku to Tientsin	1.00
Repacking in Tientsin	4.00
Transportation	25.00
Total	34.00
Retail selling price	75.00

The approximate annual production of salt in the Tongku region is 161,000 tons, of which the province of Chihli produces 80,000 tons, the province of Honan 76,000 tons, and Tientsin and vicinity 5,000 tons.

TEA TRADE.

THE SHARP DECLINE EXPLAINED.

Mr. Walter J. Ballard, of Schenectady, N. Y., explains the cause for decline in China's tea trade in the following:

There was a day when the only good tea was supposed to be that which came from China, but it is not so now. For instance, Great Britain used only 5,600,000 pounds in 1905, against 9,900,000 pounds in 1904 and 12,700,000 pounds in 1903. In like manner American imports of Chinese tea decreased from 55,000,000 pounds in 1903 and and 53,000,000 pounds in 1904 to 43,000,000 pounds in 1905. At the same time American imports of Japanese tea increased from 37,000,000 pounds in 1903 to 42,000,000 each in 1904 and 1905. American imports of East Indian tea, chiefly from Ceylon, also increased from 6,700,000

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pounds in 1903 to 7,600,000 pounds in 1904 and 7,800,000 pounds in 1905. The past ten months Great Britain took 123,500,000 pounds of Indian tea, 74,800,000 pounds of Ceylon tea, and 10,400,000 pounds of Java tea.

Japan exports 40,000,000 pounds of tea this season, against 47,000,000 pounds last season, nearly all of which is used in the United States and Canada. Japanese tea is not popular in Great Britain. The lessened use of Chinese tea is due to two causes: First, a deterioration in its quality; second, the difficulty of obtaining any considerable quantity of good Chinese black tea. A correspondent of the London Times says: "One important result of the lower cost of production has been that, whereas in the beginning India and Ceylon teas displaced China tea by virtue of superiority alone, now they have almost driven it out of the market here by being able to be sold at a price with which the Chinamen can not compete."

Our total imports of tea for the three fiscal years named are given in the annexed table:

Year.	Pounds.	Value.
1903	108,000,000	$15,600,000
1904	113,000,000	18,200,000
1905	103,000,000	16,200,000

It is interesting to compare that with our coffee imports, which were:

Year.	Pounds.	Value.
1903	915,000,000	$59,200,000
1904	995,000,000	69,550,000
1905	1,047,000,000	84,650,000

FOOD FOR POULTRY.

GLEANINGS FROM PADDY FIELDS SUFFICE.

Consul-General Rodgers, of Shanghai, in reply to inquiries as to whether China offered a market for the sale of food for poultry, responds in the negative, and furnishes interesting information in regard to the raising of poultry by the Chinese. He writes:

While the Chinese are perhaps the most successful poultry raisers in the world, according to natural methods, they are also undoubtedly the most economical in the business. The foreigner, seeing the immense numbers of ducks, chickens, and geese of the countryside, naturally assumes that large amounts of grain or other poultry food must be consumed. Yet investigation reveals the fact that the Chinese consider the fowl perfectly able to pick up a living without much assistance on their part, and as a consequence herding is practiced, each flock being kept on the move, as sheep are on a range. It is true that at some periods of the year the fowls are fed, but the food given them would be considered chaff in other countries, and is practically worthless. The

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natural result of this is very poor poultry, but that is the rule and standard in nearly all China. It is an absolute fact, moreover, that the gleaning of the paddy fields by the flocks of ducks, which often contain several hundred, is a distinct benefit to the Chinese farmer. As in all other methods of life, the poultry-raising process is another wonderful exhibition of the marvelous economy of the Chinese. Indeed, it may be said that the frugality of the Chinese in such industry, as compared with the prodigality of others, is an excellent illustration by which to measure the radical difference between the Chinese and all other races in the production of wealth. In view of these statements China can not be considered a promising field for the exploitation of American poultry foods, unless there should come a great increase in the value of the product and a reversal of established custom, neither of which is likely to occur.

STUDENTS IN JAPAN.

JAPANESE SCHOOLS PREFERRED TO THOSE OF WESTERN NATIONS.

Mr. Walter J. Ballard, of Schenectady, N. Y., furnishes the following on the education of Chinese young men in Japan, based on an article written by Mr. Kiyoshi K. Kawakami, a well-known Japanese scholar and writer. The reasons for the Chinese avoiding the United States and other western nations in selecting schools for their young men are explained by Mr. Kawakami. The article follows:

Ever since the meeting at Tientsin of 600 Chinese students, representing 26 colleges, and the resolution of some 200 members of commercial guilds from 17 provinces binding themselves and their guilds to abstain from buying American goods, much interest has centered in the minds of Americans around the fact of the presence of so many Chinese students in Japan. Mr. Kiyoshi K. Kawakami, A. M., author of "The Political Ideas of Modern Japan," puts the matter very clearly in the Sun Trade Journal for October. The distinguished writer says:

"When I tell you that the very pick and flower of the youthful element of the Celestial Empire are now turning their backs upon the United States and flowing into Japan at the rate of hundreds monthly; when I tell you, what is still more important, that upon the shoulders of these young men, imbibed with the spirit of the most vigorous and progressive of all the oriental countries, devolves the responsibility of awakening the colossal old Empire now in a state of deep slumber, you will not fail to recognize that the issue before you is not merely an issue of dollars and cents, but a problem of vastly greater significance."

UNITED STATES TOO ANNOYING.

Mr. Kawakami explains that, as a member of the imperial Japanese commission to the St. Louis World's Fair, he made the acquaintance of Mr. Wong Kai Ka, imperial Chinese commissioner, who graduated from Yale years ago. That gentleman was taking his sons back to be educated in Japan rather than in the United States, saying: "I like the educational system of America, but the country is too annoying to the Chinese." There is the cue to our own interests—make it less annoying. The writer continues:

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"It was in 1898 that a coterie of 68 Chinese students was first sent to Japan by the Chinese Government. Twenty-seven and twenty-nine of these were trained to be officers and teachers, respectively, while the rest attended various colleges. Since then the number of Chinese students in Japan has steadily increased until last year it reached the 1,000 mark. Statistics issued by the Japanese department of education give the following:

Year.	Government students.	Private students.	Total.
1902	59	81	140
1903	184	335	519
1904	838	753	1,591

"For a movement beginning with 68 and having by March 31, 1904, 1,591, this progress in only seven years is remarkable. In January, 1905, there were 300 new arrivals, and they go in hundreds monthly. At present (April) Tokyo is the educational home of not less than 3,000 Chinese students. By January 1, 1906, the number may be 10,000.

LIBERAL COURSE OF INSTRUCTION.

"The schools they attend are numerous and varied, numbering 86. They are in the Imperial University, teachers' training school, military school, liberal education college, school for railway engineering, training school for sheriffs and policemen, English language school, technological school, law school, medical school, and others, as well as studying law, politics, economics, history, and literature in private colleges. The largest number—about one-fifth—are in the teachers' training school. That means wide-spread Japanese liberal education in China."

REASONS FOR THE MOVEMENT.

Mr. Kawakami does not attribute all this movement to the feeling and circumstances attendant upon the Chinese boycott of things American, because of the enforcement of the Chinese-exclusion act. He lays stress on Japan's remarkable advance in less than forty years, the affinity of racial feeling, and the close relationship between Chinese and Japanese cultures. He also points out that educationally Japan is not yet on the same plane as the foremost western countries, and that the educational advantages offered in Japan are by no means greater than the advantages offered in America or Europe. The prevailing cause, therefore, of the Chinese students being sent by preference to Japan are the bars, social and legal, put up against them in the West. On this point the Japanese writer says: "By sending her students into the centers of western civilization, China could possibly derive a greater educational benefit than she could from Japanese schools." Mr. Kawakami closes his able article with this eloquent appeal:

"By extending welcome hands to these students from China the West could rightly claim the honor of lighting a sacred torch of civilization in the dark interior of the colossal Empire, besides indirectly promoting its commercial interests in the Far East. The glory and recompense of a country (the United States) which led the nations in declaring the 'open door' in China could be a thousand times greater would she lend her helpful hand in the onerous task of enlightening

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China, until she could proudly point to the noble mission accomplished amid the love and respect and gratitude of the redeemed and regenerated Chinese Empire."

There is food for thought, very serious American thought, in all of the foregoing.

MANCHURIA.

THE STRUGGLE FOR MARKETS.

EXTENT AND VALUE OF TRADE—POPULARITY OF AMERICAN PRODUCTS.

Consul-General Sammons, of Niuchwang, some time ago wrote a lengthy and interesting report on Manchuria, from which the following extracts are taken:

The province of Manchuria is equal in area to that of all New England, Delaware, Virginia, Pennsylvania, West Virginia, and South Carolina combined. It is considerably over seven and one-half times as large as the State of Indiana, and about three times the size of the State of Washington. It is nearly twice the size of Japan, and in tillable land has vast areas, while Japan can, with the greatest thrift and industry, render but a small part of its total acreage suitable for agricultural purposes. Experts estimate the population of Manchuria to range between 15,000,000 and 20,000,000 or 25,000,000.

Manchuria consumes more of the goods of the United States than of any other foreign country, and since practically all of these imports enter through Manchuria's chief commercial gateway—the port of Niuchwang—a report on prevailing conditions at this place ought to be of interest. America, Japan, and England have important commercial interests in Manchuria. Several other nations, however, participate in this trade. Of these, the Germans are quite active. While the total business credited to England in Manchuria is quite formidable, the bulk of it results from the importation of Indian yarns.

FAVORABLE POSITION OF JAPAN.

Japan, which won its commercial battle in Manchuria while the Russians were yet actually in possession of Niuchwang and Port Arthur, is now in a position to far surpass its remarkable trade record of the past ten years. It already buys the bulk of what Manchuria has to sell in the markets of Niuchwang. What trade centers it may establish elsewhere, as a result of reciprocal trade relations growing out of present conditions, or the proportions to which its share of the total commerce of Niuchwang and Manchuria will ultimately rise, are mere conjecture. The Japanese have the advantage of favorable location and intimate knowledge of the country, and if their tireless energy and wonderful success, commercially speaking, in Manchuria is to be taken as an indication of the measure of their possible achievements in the Orient the channels of commerce in the Far East may be radically changed. Prior to the Japanese-Chinese war, or, say, ten years ago, Japan took little part in the commerce of Niuchwang.

For ten years Niuchwang, or Newchwang—and by many known as Yingkow—has been practically on the firing line of wars and uprisings in the Far East, particularly in Manchuria. Consequently conditions, from a commercial standpoint, have been and are unsettled.

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Commercially the future will turn largely on the method of applying the "open-door" policy, although in any event Japan may be looked to as the controlling factor. Between each war has come a great wave of commercial prosperity; with each change of the flag on the imperial Chinese custom-house, or over the native city, there have come to Niuchwang higher prices for labor and rents and cleaner streets and better roads.

In order to show what are the chief articles imported into Manchuria through Niuchwang and what will sell most freely, the following table has been prepared, giving the quantity and value of twenty-five articles of the import trade. The value is stated in gold dollars:

Article.	Unit.	Quantity.	Value.
Sheetings	Pieces	1,148,884	$2,750,742.92
Shirtings	do	220,388	611,390.03
Cotton, Italian	do	88,670	333,765.43
Yarn	Tons	10,421	2,734,379.80
Drills	Pieces	454,711	1,208,130.46
Sugar	Tons	17,333	883,137.02
Kerosene oil	Gallons	4,762,640	649,716.61
Cigarettes			297,221.46
Matches	Gross	1,891,265	278,172.97
Jeans	Pieces	139,480	271,498.69
Wines, saké and occidental			266,150.12
Paper	Tons	896	226,307.47
Flour (American)	do	5,197	202,624.88
Bags	Pieces	2,997,700	200,187.60
Stores, household and marine			153,814.12
Cotton flannel	Pieces	46,464	116,998.19
Candles	Tons	543	104,951.39
Coal	do	26,504	97,346.40
Seaweed	do	2,743	82,378.30
Cotton blankets	Pieces	202,435	81,512.05
Blankets and rugs	Tons	122	76,178.03
Dyes and colors			74,277.13
Clothing			64,944.50
Beer and porter			64,067.16
Black pepper	Tons	220	56,144.78

Much that is showy and cheap in the way of semiluxuries finds a ready market in China, and in such articles Japan seems to understand the market better than her commercial rivals. In sheetings, for instance, no imitation, and no product that may be claimed to be "just as good," takes the place of the American staple. Indeed, if the nationality of the manufacturer of the immense sails used by the thousands of Liao River junks were marked by national colors the stars and stripes would be found floating over the great bulk of these river carriers.

The following statement shows the most important imports of the United States into Manchuria, together with their value in gold dollars for the years specified:

Article.	1902.	1903.	1904.
Sheetings, gray, plain	$2,838,756	$2,728,796	$2,732,856
Drills	899,695	1,562,154	1,181,139
Kerosene oil	77,199	800,936	647,924
Flour	88,138	31,438	244,619
Shirtings:			
Gray, plain	(a)	102,986	184,849
White, plain	(a)	2,154	4,504
Jeans	167,743	195,915	159,871
Cotton flannel	9,052	42,297	92,588
Genseng, clarified	1,429		8,505

a Not specified.

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The following table shows the values, in gold dollars, of principal cotton goods imported from the British Empire in the years specified:

Article.	1901.	1902.	1903.	1904.
Sheetings	$8,212.79	$41,653.58	$176,392.48	$13,893.26
Drills	1,483.93	3,639.09	1,358.42	16,975.73
Jeans	22,149.30	44,663.16	50,851.78	109,700.51
Flannel	142.55	6.51	1,649.20	14,081.06
Shirtings	(a)	(a)	161,927.88	127,283.59
Yarn	5,318.08	4,169.66	1,613.24	3,602.21
Yarn, Indian	2,885,045.74	2,564,272.07	2,296,607.72	2,172,500.95

a Not specified.

AMERICAN GOODS POPULAR.

While a large percentage of the coasting steamers fly the British flag, the English-made goods, particularly cottons, do not sell in the Manchurian markets as readily as those imported from America. As a rule, however, the fact that American and English goods are to be relied upon goes far to cause ready sales in this part of the world. The Chinese purchaser feels that American made goods are safe to buy, and for that reason it has been temporarily profitable in the past to foist upon the Chinese cheap imitations of honest American wares. The protection now afforded by trade-marks, jointly by the United States and Great Britain, will practically eliminate this infringement.

JAPANESE COMMERCIAL ACTIVITY.

The occupation of Manchuria by the Japanese military forces for so long a time, together with the detailed information which the Japanese have regarding the country and its resources, gives them a great advantage over all other nations in the commercial exploitation of Manchuria. Moreover, Japan has, since its war with China in 1894–5, become the chief customer of Manchuria's principal commercial product—bean cake—and reciprocal trading relations are growing gradually and quite naturally therefrom. While American cotton goods are standing on their merits, being of a superior quality, still the Japanese in similar lines are improving their methods with increased experience. The same may also be said of the Chinese cotton mills. Nevertheless, American cotton goods lead both in the quality and in the quantity sold. In other special lines, particularly in kerosene oil, and with an unrestricted field, American goods will no doubt be able to command a market in Manchuria. The country is comparatively new, but with stability in government control, assured protection of vested interests, and an "open-door" policy prevailing, American enterprise in special lines will insure a constantly increasing volume of business. In mining machinery and farm implements the field seems inviting.

PHONOGRAPHS.

POPULARITY OF TALKING MACHINES.

Consul-General Sammons also furnishes a highly interesting report on the use of phonographs, graphophones, and gramophones in Manchuria. The recent boycott had the effect of creating popular prejudice toward American machines, but it is expected that this prejudice will

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entirely disappear shortly and that the growing demand for machines of this kind will restore the popularity of those from the United States. Mr. Sammons writes:

Phonographs, graphophones, and gramophones are sold in this market in small numbers, mostly by native dealers, who purchase cautiously through Shanghai houses. A cheap style of graphophone has sold here for from $30 to $40 Mexican, approximately $15 to $20 gold. Some of these instruments, ordered three or four years ago, when the Russians occupied this port, remain unsold. The indications are that a more costly instrument of the gramophone variety will become more popular. From $140 to $160 Mexican is paid for the better grades by Chinese, who take very enthusiastically to musical instruments of this kind. The Chinese have peculiar ideas regarding music-box trade-marks. One quite famous trade-mark, showing a dog alert to catch his master's voice as it came from the horn, proved distasteful, for the reason that it seemed to couple the canine with the human listeners. Therefore, such a trade-mark had to be altered so as to show an old man listening to the music instead of a little terrior with a quizzical, expectant expression, mystified by a familiar human voice coming from a metal funnel.

IN THE ARMY AND ON THE STREETS.

A few phonographs have been used by the Japanese army in lower Manchuria, largely through the efforts of the Young Men's Christian Association, and the soldiers have shown continued interest. Whenever the phonograph is in operation there is always a crowd of interested soldiers who will not leave until the music ceases. A phonograph, graphophone, or gramophone equipped with a Chinese record invariably attracts a throng, the limits of which indicate the zone of the carrying power of the instrument. Records used in this part of China are made, as a general thing, at Shanghai. Those reproducing the songs of Chinese actresses seem most popular. Phonographs are frequently used in public to attract a crowd, but there are in private Chinese families quite a number of small and inexpensive instruments of various patterns, largely of the toy variety. The cheaper grades bid fair to be supplanted by the more costly instruments.

EFFECTS OF THE BOYCOTT.

It is a significant fact that many small stocks of these instruments now in this part of the world do not appear in public under the Stars and Stripes. The license originally allowed the boycott agitation resulted in many far-reaching and insidious ramifications such, for instance, as the tendency to disguise an article of American manufacture. This catering to the boycott sentiment is reflected in the removal of "U. S. A." from many of the musical instruments offered for sale in Chinese shops. Moreover, in the oriental mind the fact that some of the instruments do not find buyers is not wholly supposed to be on account of the obsolete style or price, but is partially due to an aversion to barter in the wares of the boycotted nation. In some instances, where the fact that musical instruments are manufactured in America is disguised, the agents remove the words "Made in U. S. A." and notify the trade that "They come from England."

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There is nevertheless a growing demand for musical instruments of this class and the outlook indicates steadily increasing sales.

PREJUDICE AGAINST MODERN BEAN PRESSES.

The chief product of Manchuria, beans, is still treated in a primitive manner by many of the manufacturers of bean oil and bean cake. Even in Niuchwang, which has been a treaty port for approximately half a century, the crushing of beans with heavy stone rollers drawn by mules and donkeys continues in some of the bean mills. In such primitive institutions the oil is pressed out of the pulp by hand, wedges driven by huge beetles being used. Steam is becoming quite popular in cooking the beans after they are crushed, and in the mills that are equipped with steel steam rollers for crushing the beans, the steam is used to do the cooking, but hand-screw pressing machinery still obtains. Indeed, it is customary for bean-mill men to discourage the use of hydraulic presses on the theory that the pressure can only be applied by hand; that it must be applied gradually; and that a trial of foreign machinery in this part of the manufacture of bean cake caused, a few years ago, heavy loss to the enterprising Europeans who attempted it, and resulted in the up-to-date contrivances being discarded. At any rate, in order to render the bean pulp of the greatest value for fertilizer, all of the oil must not be extracted, and it is claimed that to know just when to remove the pressure requires great skill and watchfulness.

IMPROVED MACHINERY NEEDED.

It would seem that the possibility of utilizing improved American machinery in the extraction of oil from the beans as well as in crushing and cooking the same warrants investigation by manufacturers in this line. Advertising matter or proposals should give full particulars—that is, prices, capacity, amount of fuel required, durability, facilities for securing broken parts, estimated freight charges, the method of saving the oil, etc., and in particular assurances in detail that the pressure can be applied on the presses gradually and quickly when desired, and as to the pressure being placed on individual presses by the workman who is watching the flow of oil from the cake. The greatest objection to improved presses seems to be the belief that the pressure must be applied to a number of presses simultaneously. This, the manfacturers believe, as a rule will not bring desired results, as the established custom is for one man to watch one press and give it his undivided attention. The prevailing methods in Manchuria result in the oil being taken from the presses in an impure condition. The oil is cleaned by placing it in wooden oblong vats and waiting for the sediment to settle on the bottom.

RAILWAY AND CART TRAFFIC.

That part of the former Russian railway in Manchuria which the Japanese have taken over has been declared open to passenger and freight traffic to points in southern Manchuria. While the published notice of the reopening of the road does not specify as to nationalities, the privilege is practically restricted to Japanese and Chinese. For

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some time Japanese traders have been entering the war zone for the purpose of trading with the army under special permits issued by the military authorities. The Chinese move about the restricted districts as usual, but so far as this port is concerned those desiring to go into the interior must at the present time, on account of the outbreak of plague, be medically examined, and secure passes to enable them to go through the Japanese lines. Permits have as yet not been granted to any foreigners except the Japanese to go inland for trading purposes. A very few foreign sightseers have, however, been granted permits to visit some of the points of interest inside the war zone south of Mukden, but the fear that granting permits to any tourist leads to manifold applications is inclining the military authorities to refuse all applicants.

The use of the railway for commercial freight will prove of great assistance to traders during the winter. At the same time the carts leaving Niuchwang for Mukden points are taxed at various rates. In the published announcements rates from Talien (Dalny) to Ta-shih-chao are less than one-half the rates from Niuchwang, although the rates in both cases are the same beyond the junction point, Ta-shih-chao. This is, in effect, similar to the arrangements made by the Russians in favor of Dalny.

JAPAN.

PREPARATIONS FOR THE FUTURE.

OSAKA THE SITE FOR A GREAT COMMERCIAL PORT.

That the Japanese are a far-seeing race is shown by the way they build for the future. Consul Sharp, of Kobe, sent a clipping from the Chronicle, a Japanese paper printed in English, which deals with the determination of the Japanese to have a large harbor that will rival Shanghai, Hongkong, or even large western cities. Mr. Takugaro, a leading citizen of Osaka, thinks it is time for Japan to move forward. He points to the work in the past of Europeans and Americans in building up trade on the Atlantic, and contends the same thing is possible on the Pacific. America, China, Japan, India, and Australia are the lands visibly interested in the era opening in the Orient and on the Pacific.

The country or countries favorably situated for trade, he says, are sure to be benefited by every movement forward. Japan is already doing business with the principal countries on the Pacific, and is eagerly looking forward to the time when it will be able to extend its trade into all parts of the world. To do this, it will need facilities for handling, forwarding, receiving, and transporting goods. Panama, Mr. Nakahashi thinks, is to be the leading port on the Pacific, followed in importance by San Francisco, Seattle, Vancouver, and Portland. No important port is possible on the South American coast, for geographical conditions will not permit it. In Asia Hongkong, Shanghai, Osaka, Manila, and Dalny are to be the ports, and important in the

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order indicated. All of these are capable of being improved and doubtless will be as trade increases.

ESSENTIALS FOR A LEADING SEAPORT.

Discussing the relative advantages of the several principal commercial ports of the East, Mr. Nakahashi says:

Manila will not, despite the desires and efforts of Americans, develop into a first-class tradal port owing to the fact that, apart from the torrid climate, it has neither factories of importance nor a large field for inland trade, while, as an intermediate port for China, Japan, or Korea, the distance is too great and fuel too dear. The same may be said of Dalny to a certain extent, with the only exception in its favor that as a terminus of a 500-mile railway mails and a certain class of travelers will pass through the place. But so long as railway freight can not successfully compete with steamships, and eastern Siberia and northern Manchuria remain more densely populated than southern Manchuria, Dalny will remain a second-class tradal port. It is therefore only Hongkong, Shanghai, and Osaka which possess qualifications that will enable them to develop into important commercial emporiums in east Asia.

The shortcomings of Hongkong are that, being an isolated island, its scope is necessarily limited; it has no manufactures to speak of, while the sphere of island trade is confined to the neighborhood of Canton. Although Hongkong may continue a chief distributing center of European trade, its position is not suited to be a large mart for Pacific trade in the future. Shanghai is better situated than Hongkong in having millions of people in the Yangtze Valley, many factories in its vicinity, while it has a favorable position as an intermediate station. Its only weak point is that the harbor is not as deep as it should be for a large commercial port, and this fact greatly discounts the possibility of its becoming a port of much greater importance than at present.

Osaka, on the other hand, not only is situated on the highway of the world's commerce, but its position is unique as a distributing center for China, Korea, and the South Sea Islands. It possesses within easy reach many factories turning out articles for export, while in the matter of domestic trade it covers an area containing two-thirds of the total population of the country. For fuel the coal fields in Kyushu will give a practically unlimited supply across the water some two hundred and odd miles in extent. Osaka has already laid the foundation of becoming a great harbor, and if the breakwaters are farther extended so as to keep a depth in the harbor of 35 feet, it will become a port possessing as nearly as possible all the essential elements of a large commercial emporium in the Pacific.

VARIOUS COMPETING INDUSTRIAL ENTERPRISES.

Consul Sharp also contributes a very interesting report on various industrial enterprises that are active in Japan, most of which will shortly become competitors of similar establishments in this country and Europe. He writes:

Cotton yarns.—The spinning industry is well developed in this consular district, and cotton yarns form the principal article of export.

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In 1903 the daily average of working spindles was 897,119, and the output of yarn amounted to 233,789,301 pounds. Besides supplying the domestic demand, yarns to the value of $12,474,074 were exported from Kobé and Osaka in 1904, mostly to China and other Asiatic countries. No. 16 is the grade mostly exported, but Nos. 12, 14, 20, 22, and 32 are also shipped in considerable quantities.

Cotton textiles.—This industry is not yet so important as the spinning, but it is growing rapidly, and great varieties of goods are turned out. It is stated that there were 7,517 power looms and 212,211 hand looms in operation in 1903 in this district. Ten large mills in this neighborhood, operating an average of 4,640 looms in 1903, produced 76,702,213 yards of goods. In the first half of 1905 these same mills had 5,711 looms working and produced 52,345,742 yards. Among the textiles manufactured are gray shirtings, sheetings, drills, cotton sail duck, cotton flannel, T cloths, muslins, towels, and blankets. The domestic consumption of all these goods is large, and the exports at Kobé and Osaka amounted in value to $3,937,059 in 1904. The exportation of towels alone amounted to $681,255. These goods are sent mostly to Asiatic countries. There is also a considerable manufacture of knitted goods.

Clothing.—In connection with the cotton textile industry it is worthy of note that a large quantity of clothing and underwear is made here, exports of the latter at Kobé and Osaka amounting in value to $669,106 in 1904. The importation from abroad of shirts, collars, etc., has become insignificant owing to the development of domestic manufactures.

Carpets.—Cotton, wool, and hemp carpets to the value of $245,581 were exported from Kobé in 1904. A very creditable carpet is made here and is largely used.

Clocks and watches.—There was formerly a considerable market for foreign clocks in Japan, but now most of the cheaper kinds are made in Japan. There are large factories in Osaka and Nagoya, and even watches are turned out, though sometimes made largely from imported parts. The value of clocks exported from Kobé and Osaka in 1904 was $181,508.

Umbrellas.—European umbrellas are also made in this district on a large scale. Besides supplying the greater part of the amount required by the large and growing local demand, they are exported, principally to Asiatic countries, the value of shipments from Kobé and Osaka in 1904 being $603,707. While the ribs for the more expensive umbrellas are imported from abroad, those for the cheaper grades are made here. There is also some importation of material for covering them.

Glassware.—Window glass, mirrors, and glassware of all kinds are now manufactured in this district, and in 1904 were exported from Kobe and Osaka to the value of $509,747. It is only a few years since that the supply of sheet glass came entirely from abroad, and it was thought that the article could not be manufactured in Japan. At present sheet glass, little inferior to that imported, is not only manufactured in Japan but exported to China, India, and Burma. The principal glass factory in Japan is the Shimada Glass Works, of Osaka, which employs about 400 operatives. The glass made by this factory has obtained a good reputation in China and India, and the Government is doing what it can to encourage the industry by using Japan-made glass in its buildings.

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Lamps.—Lamps and parts, such as burners, chimneys, etc., were formerly imported from the United States, but now all except some expensive or patented styles are manufactured in Japan and are exported to the neighboring countries. The development of glass manufactures has made the growth of the lamp-manufacturing industry much more rapid. The value of lamps and parts exported from Kobe and Osaka in 1904 was $244,225.

Cigarettes.—The Government monopoly of course prevents the importation of manufactured tobacco, but in addition to having the domestic market to itself, it exports largely to Asiatic countries. The value of cigarettes shipped abroad in 1904 from Kobe and Osaka was $1,145,252. Paper mouthpieces, formerly imported from the United States, were exported to the value of $34,571 in 1904, of which about $12,000 represents mouthpieces sent to the United States.

Paper.—The manufacture of European style paper is well developed, and at present many newspapers are printed on paper of domestic make. The finer grades also are produced.

Machinery.—A great deal of the simpler kinds of machinery is already made in Osaka, and exports amounted to $285,609. Electric motors are manufactured in Kyoto and Osaka, but not over 17 horsepower ordinarily. Dynamos and other electrical appliances are also made in the district to a considerable extent. The majority of the locomotive engines are imported, but some are constructed here, usually with imported parts. Railway cars are made, the trucks being commonly imported.

Bicycles.—The manufacture of bicycles has reached an advanced stage, the principal seat of the industry in this district being Nagoya. The spokes, tires, and chains for these machines are imported from the United States. American bicycles are still imported though more expensive.

Paints.—For some time paints have been made in Japan, but until recently they were considered of inferior grade. A Tokyo company that has been very successful in the business is about to establish a factory at Osaka that will be able to produce $500,000 worth annually. This paint has made a good name for itself in Japan and is being exported to China and Korea.

Brushes.—Japanese brushes have been exported to the United States for some years, and Osaka is one of the principal places where they are made. The value of those exported through the port of Kobe in 1904 amounted to $407,519.

Buttons.—These are largely manufactured in this district, and in addition to their use here $228,888 worth were exported from Kobe and Osaka in 1904, the largest part being brass buttons sent to China, Korea, etc., though there were also included others of shell, bone, and other materials for the European and American markets.

Leather goods.—Shoes, and leather trunks and bags are manufactured in this district, and so cheaply that competition from abroad does not exist. The value of boots and shoes exported from Osaka in 1904 was $38,012.

Refined sugar.—This commodity has hitherto been imported on a large scale, but domestic refineries are being established in this district, as in other parts of Japan, and in time should supply the Japanese market. This will be of interest when the Philippines and Hawaii are considered.

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Beer.—This beverage is made near Osaka and Nagoya. The domestic brew supplies the local market, there being, on account of the protective duty, scarcely any importation of foreign beer, though some ale, porter, etc., is imported. In addition beer valued at $228,462 was exported from Kobe and Osaka in 1904.

Soaps and perfumes.—These are manufactured in this district, and toilet soap valued at $141,926 was exported from Osaka in 1904. There is still a demand for the finer foreign soaps, but the market for them is naturally limited.

Other manufactures.—Surgical instruments, foreign musical instruments, builders' hardware, tools, stoves, crucibles, drugs, scales, hats, and caps are among the other articles formerly imported in large quantities that are now being made here, and, on account of their cheapness, though sometimes inferior in quality, they are supplanting the imported articles.

CHECK TO FOREIGN IMPORTS.

That Japan is likely to be active in checking the import of foreign goods which might compete with home industries is shown by the action taken by the chambers of commerce in Japan. It appears that the united chambers of commerce decided some time ago to intrust seven chambers in the country with the preparation of the draft of a new law for the protection and furtherance of Japanese industries, which is to be submitted to the Diet. These chambers are said to have appointed special committees to report on the matter.

In the report of the Kobe committee it was recommended that the importation of goods which compete with home industries should be checked as much as possible. This is to be achieved by the raising of the statutory tariff and the abolition of the conventional tariffs or, if the latter measure be inadmissible, by the establishment of consumption taxes. The abolition of all business taxes for those industries which require protection was also proposed, besides the duty-free import of necessary machinery and raw material.

THE FOOD QUESTION.

FLUCTUATION OF THE RICE CROP—DEPENDENCE ON FOREIGN COUNTRIES FOR FOOD—INCREASE IN MANUFACTURES.

A recent issue of the Japan Chronicle, forwarded by Consul-General Miller, of Yokohama, contains an interesting article on the rice crop of Japan, its insufficiency to meet domestic needs, and the extent to which Japan is dependent upon foreign countries for food supplies. It is pointed out that Japan is rapidly becoming a manufacturing nation, and that this fact, taken in connection with the steady increase in population (400,000 per annum), that foreign countries must be looked to for supplying deficiencies in food supplies, leads to the suggestion that Japan has reason for not imposing duties on importations of breadstuffs. The Chronicle says:

The last estimate of this year's rice crop, taken by the department of agriculture and commerce on October 24, shows a diminution of

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25.7 per cent compared with last year and of 13.9 per cent as against a normal year. During the last ten years the annual outturn of the rice crop was as follows:

Year.	Yield.	Year.	Yield.
	Koku.[a]		*Koku.*[a]
1895	39,960,798	1901	46,914,434
1896	36,240,351	1902	36,392,266
1897	33,039,293	1903	46,473,298
1898	47,387,666	1904	51,430,221
1899	39,698,258	1905	38,234,265
1900	41,466,432		

[a] 1 Koku=4.96 bushels.

As will be seen from the above figures, the yield of rice is subject to much fluctuation according to the conditions of the weather experienced in these years. There can be no doubt that the cultivation of rice is rather an uncertain, not to say risky, industry, for if the elements should conspire against it no amount of labor will avail to prevent the crop from ending in failure. It is not unnatural, therefore, that the Japanese should gradually turn their attention from agriculture to manufacturing industries, which, if fully developed, may enable Japan, like England, to depend upon foreign countries for her food supply. Even now Japan obtains a considerable amount of food from abroad. Last year's rice crop in this country was exceptionally good, the yield amounting to 51,430,000 koku. But the supply was evidently inadequate to feed the population, judging from the large amount of food supplies Japan imported from abroad during the same year. The importation of foreign rice in 1904 amounted to close upon 60,000,000 yen in value, not to mention flour to the value of nearly 10,000,000 yen imported during the year. It is true that during the same period Japanese rice to the value of 4,724,000 yen was exported, but the amount is trifling in comparison with the import, and when deducted the balance remaining constitutes the amount which Japan spends in buying rice to fill the inadequacy of the domestic supply.

A SERIOUS PUBLIC QUESTION.

When these figures are considered, together with the fact that the population of Japan is increasing at the rate of more than 400,000 per year, it is not surprising that the question of food supply should engage the serious attention of her public men. Efforts are being made to increase the yield of rice by extension of the area of cultivation and by the introduction of agricultural improvements, but it is evident that the increased production by these means can hardly be at a rate to keep pace with the rapidly increasing pressure that is put on Japan's food resources.

It may be interesting in this connection to give the value of flour and rice imported into Japan and also of Japanese rice exported during the last ten years.

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Year.	Import of flour.	Import of rice.	Export of rice.
	Yen.	*Yen.*	*Yen.*
1895	406,000	4,357,000	7,207,000
1896	994,000	5,662,000	7,951,000
1897	1,156,000	21,528,000	6,141,000
1898	2,022,000	48,219,000	5,920,000
1899	1,370,000	5,960,000	10,282,000
1900	3,882,000	9,021,000	3,576,000
1901	2,873,000	11,878,000	6,908,000
1902	3,278,000	17,750,000	6,679,000
1903	10,324,000	51,960,000	4,959,000
1904	9,624,000	59,792,000	4,724,000

While the foregoing figures exhibit considerable fluctuations, there is a general tendency to an increase of imports and a decrease of exports, which is the more noticeable when it is taken into consideration that for some years past the harvests have been good. Japan is gradually developing into a manufacturing country, and will in the future come to be dependent in large part on foreign countries for her food supply. All the more reason, therefore, that the Government should refrain from placing duties on food imports which must handicap her manufactures by increasing the cost of production.

LARGE INCREASE IN MANUFACTURING INDUSTRIES.

Consul-General Miller sends another clipping from the Japan Chronicle which contains statistics compiled by the Kobe Chamber of Commerce and which shows the remarkable progress made by the manufacturing industries of Japan during the last ten years. Some of the industries have exhibited such strides that the importation of certain manufactures from abroad has either been totally stopped or checked to a considerable extent. The returns of foreign trade for 1904 show that the exportation from Japan of manufactured articles amounted in value to 71,400,000 yen, partly manufactured articles to 144,700,000 yen, while the export of raw material amounted to only 39,500,000 yen. The latter total, compared with the figures for 1894, shows an increase of only 92 per cent, whereas manufactured and partly manufactured articles show an increase of 216 and 172 per cent, respectively.

The total number of factories in Japan at the end of 1903 was 8,274, of which those making use of machinery for motive power numbered 3,741, or 45 per cent, while the remaining 4,533, or 55 per cent, employed no such motive power. These, compared with the census returns taken at the end of 1894, show an increase of 1,957 in the former and of 1,332 in the latter. The figures quoted above speak eloquently of the manner in which Japan is taking to the use of labor-saving machinery in her industries.

The total number of operatives employed at the various factories at the end of 1903 was 483,839, of whom 182,404, or 37.7 per cent, were males, and 301,435, or 62.3 per cent, were females. Regarding the age of these operatives, those who were above fourteen years numbered 442,879, and those under that age 40,960. Of the latter, 8,576 were males and 32,384 females. From these figures it will be seen how important a part female labor plays in Japanese industries, due in large

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measure to the fact that weaving and spinning form so large a proportion of the factories in Japan.

COTTON AND LEATHER.

The Japan Chronicle of October 31, published at Kobé and forwarded by Consul Sharp, contains the following paragraph:

The weaving looms in operation in the various spinning mills of Japan at the end of September numbered 6,923, showing an increase of 1,212,as compared with the end of the half year ending March last. The Osaka and Mie spinning mills are working on the largest scale, the Osaka mill having 1,605 looms in operation and the Mie mills 2,099 looms. The output of cotton during September amounted to 9,688,050 yards, showing an increase of 963,760 yards over the monthly average for the first half of this year, or of 3,772,495 yards over the output for September, 1904. The consumption of raw cotton in September for weaving purposes amounted to 3,318,191 pounds, an increase of 493,077 pounds over the monthly consumption during the first half of this year, and of 1,308,517 pounds over that for September last year.

The same paper contains the following:

The demand for belting is rapidly increasing in Japan, owing to the constant growth in the number of factories, but the leather industry in this country is unable to meet the demand, not only as regards quantity but quality as well. Japanese belting is inferior to the imported article and also higher in price, so that although spinning mills would willingly place their orders in Osaka, the center of the leather industry, they can not yet do so. Time will probably bring improvements in its train. The business of leather making is at present quiet in Osaka, though it enjoyed great prosperity during the war.

SERICULTURE.

Henry B. Miller, consul-general at Yokohama, has forwarded a pamphlet on sericulture, by F. A. Vivanti, the best recognized foreign authority on sericulture and the whole silk industry of Japan. (It is on file in the Bureau of Manufactures.) The consul-general calls particular attention to Mr. Vivanti's general concluding observations, which are as follows:

Two things in Japan stand out conspicuously to the careful observer: First, the remarkable unanimity and patience with which the Government and people work together whenever an object beneficial to both is to be attained, and, second, the almost inexhaustible amount of truly skilled labor that can be easily and quickly trained and utilized. In most parts of the world, though heavy manual labor is comparatively plentiful, it is a matter of considerable difficulty to train it to finer occupations; in Japan, on the contrary, the mass of the people are by nature so quick to learn and by instinct so artistic that the ordinary laborer can be transformed into a skilled one with exceptional facility.

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INDIA.

A NEGLECTED MARKET.

LARGE CONSUMPTION OF COTTON GOODS.

An American gentleman residing in Calcutta writes the following letter to the Department of Commerce and Labor in regard to trade with India:

Of the manufactured products imported into India the United Kingdom gets 67 per cent, while the United States gets but 1½ per cent. Calcutta is the great commercial distributing point of India, reaching by her water and railway transportation about 200,000,000 people, whose necessities are constantly increasing, and you may easily imagine what such a trade means. More than one-third of the imports into India consist of cotton piece goods, amounting to about $100,000,000 annually, and of this trade the United Kingdom gets about two-thirds, and the United States, which produces the cotton and has the best machinery in the world for its manufacture, gets practically nothing. And so it is of the various manufactures of iron and steel which are consumed in large quantities in India. I am satisfied that with proper efforts on the part of our manufacturers and exporters a large share of this trade may be secured.

I have frequently urged that our manufacturers and exporters should exploit India, but they seem to have had such a large demand at home and nearer markets that India has been neglected. One means of introducing American manufactures into India is the establishment of a museum of samples representing the principal manufactures of the United States adapted to this country, to be established in Calcutta under the control and management of a first-class business man, who would employ native assistants familiar with the trade, and that sales be made from samples and the goods delivered direct to the purchasers, after they had established a satisfactory bank credit, thus saving the commission of middlemen. This would obviate the distrust the native merchants (who are naturally suspicious) have of buying from traveling salesmen who take their samples away with them, as the samples from which the purchases were made would be here with which to compare the goods upon delivery.

This is a mere outline and suggestion of such a business, and the details will naturally suggest themselves. Such a museum was established in Bangkok, Siam, under the auspices of the Japanese Government, a few years ago, and I am informed that it has resulted in largely increasing the sales of Japanese manufactures there.

The New York Export and Import Company is doing some such business here, but it is on too small a scale to attract attention. It seems a great pity that the United States, which purchases so much from India, should have such a small proportion of the import trade of the country, and I am strongly of the opinion that with proper efforts on the part of our manufacturers and exporters a fair share of this large and valuable trade may be secured.

There is no country in the world that uses more cotton piece goods than India, importing about $100,000,000 annually, and yet our manufacturers are neglecting this great market. Why is this? Can't you stir them up to the importance of this market?

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CUSTOMS SERVICE.

NEW REGULATIONS FOR PASSENGERS' BAGGAGE.

Consul Masterson, of Aden, reports that for some time there has been a considerable diversity in the different custom-houses of the ports of India in the construction of the rules in regard to exemptions in passengers' baggage under the customs act of January, 1904. Under these rules even pianos and motor cars have been passed through at some custom-houses, and so the British Indian retail dealers have entered a protest against such undue liberality. For these reasons the government of India has decided that the present rules should be revised. As Aden is under the Bombay presidency, these customs rules in regard to passengers' baggage apply to that port.

Following are the principal changes made regarding personal baggage:

Baggage includes all packages accompanying and imported by a passenger for his personal use or for the use of members of his family traveling with him, provided that the articles are not for sale, that they do not form part of the cargo, and are not included in the manifest.

All baggage will ordinarily be passed free of duty, provided that the number of quantity of each article in respect of which exemption is claimed is, in the opinion of the collector of customs, moderate and reasonable, having regard to the state and occupation in life of the passenger.

Duty must be paid on the following articles in all cases:

Pianos, pianolas, carriages, motor cars, and motor cycles.

Arms and ammunition and all other articles enumerated in Schedule II of the Indian tariff act, 1894.

Alcoholic liquors exceeding 2 quarts in quantity, perfumed spirits exceeding 1 quart, and all other articles enumerated in Schedule III of the Indian tariff act.

Cigars exceeding 100 in number, whether in opened or unopened boxes, and other tobacco exceeding 1 pound in weight.

CENSUS OF THE BRITISH INDIES.

Consul-General Guenther, of Frankfort, has extracted from the English Blue Book the following facts and figures:

The British East Indies comprise 1,766,597 square miles with a population of 294,000,000, almost 41,000,000 more than twenty years ago. This population lives in 2,148 cities and 728,605 villages with 55,841,315 dwellings. Two hundred and sixty-five million live in the country, and of these 192,000,000 support themselves entirely by agricultural pursuits. The chief product is rice, with which 70,000,000 of acres are planted. Last year the rice crop amounted to 439,280,700 hundredweight. Of wheat, which comes second, the crop was only 9,600,000 hundredweight. Of the population 207,000,000 are Hindoos and 62,000,000 Mohammedans. The total number of Christians is 2,923,241, of whom 2,600,000 are natives, an increase of 700,000 in ten years. In the whole of India there were only 18,000 Jews; 277,000,000 can neither read nor write. The taxes per capita of population increased from 36 cents ten years ago to 45 cents at present. The total railroads of India yielded last year a net revenue of £860,669, while only five years ago the deficit amounted to £620,000.

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OCEANIA.

AUSTRALIA.

MANY COMMERCIAL ACTIVITIES.

INCREASED EXPORTS OF WOOL—STEAMSHIP EXTENSION.

Consul General Bray, of Melbourne, writes that the exports of wool from Australia and New Zealand for the first three months of the present season, from July 1 to September 30, 1905, show an increase of 50,689 bales. The exports from Australia show an increase of 50,806 bales over those of the corresponding period of 1904 and are over 66,000 bales greater than the same period of 1903. The exports from New Zealand show a decrease of 117 bales over 1904 and of 5,303 bales over 1903. The following table shows the number of bales shipped from each State of Australia and from New Zealand from July 1, to September 30, of each year:

State.	1905–6.	1904–5.	1903–4.
	Bales.	*Bales.*	*Bales.*
Victoria	13,216	14,088	10,475
New South Wales	91,078	55,765	41,545
Queensland	23,359	12,651	4,008
South Australia	7,435	3,961	11,582
Western Australia	5,684	5,501	8,783
Australian total	142,772	91,966	76,388
New Zealand	23,451	23,568	28,754
Grand total	166,223	115,534	105,142

FOREIGN TRADE.

Australia's exports for the nine months ending September 30 were $122,022,748, against $111,452,656 for the corresponding period of the preceding year. These figures do not include exports of gold and specie, which reached nearly $37,000,000, against upward of $64,000,000 for the corresponding months of 1904, a decrease of $27,573,000. The value of the four leading articles of farm produce exported in the period named compared with 1904 was as follows:

Article.	1904.	1905.
Butter	$6,920,384	$6,035,565
Wheat	21,652,572	18,559,011
Flour	2,802,646	4,725,279
Wool	30,571,295	34,104,520

STEAMSHIP LINE TO BOSTON.

A direct line of steamers has been established between Australia and the port of Boston, Mass., consisting of the two vessels, *Eldwanga*,

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2,000 tons, and *Adansi*, 2,644 tons, which will run alternately, beginning in the month of November. The line is established as an experiment by the well-known firm of shipowners, Messrs. Elder, Dempster & Co., of Liverpool, England, and, if successful, will constitute an important development, both in the wool trade and in the general trade relations between Australia and America.

MAILS FOR CANADA.

The agreement between the Commonwealth of Australia and the Canadian-Australian line of steamers for the carriage of mails between Australia, Fiji, and Canada has been further extended from May 1, 1905, to July 31, 1906, with a proviso that if neither party gives not less than three months' notice of termination prior to the latter date the contract shall continue until July 31, 1907. The subsidy to be paid amounts to $321,189 per year, being an increase in the subsidy of nearly $30,000, of which amount Canada pays $180,503, Australia $129,579, and Fiji $11,107. The Canadian portion of the subsidy is paid by the department of trade and commerce and the Australian and Fijian by the postal departments of those countries. The trade between Australia and Canada, which it was thought the establishment of this line of steamers in 1903 would foster, is steadily decreasing, and owing to the recent decision of the Australian minister of customs, whereby the rail freight between Ontario and Quebec has to be added to the value of goods shipped at Vancouver to Australia, it is anticipated that the freight-earning power of this line of steamers will be further lessened and considerable benefit derived by the San Francisco line between that port and Australia.

STEAMSHIP ENTERPRISE.

The Nippon Yusen Kaisha (Japan Steamship Company) has placed contracts in Great Britain for the building of 18 new steamers. This company ran a line of steamers between Yokohama and Australia, which ceased during the war, and it is anticipated will soon resume operations. It is not known how many of the new vessels are intended for the Australian trade.

GERMAN BANK.

For many years the establishment of a German bank in Australia has been advocated by the German residents in this country, but no practical steps were taken to carry out the proposition. The matter is now reported to have assumed definite shape, and one of the leading Berlin banking institutions intends opening branches in Melbourne, Sydney, and Adelaide. It is claimed that the establishment of these branches will tend to promote German trade and other interests in Australia and will be largely supported.

DRIED MILK.

Australia has adopted the system of drying milk which is said to have been very successful in London, England. The milk is dried between steam rollers and sold as a powder, from which nothing but water has been extracted and to which nothing but water requires to

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be added to make wholesome, clean, and sterile milk. A leading medical officer here is reported to have said that the adoption of dried milk at some of the asylums for consumptive patients and in general hospitals has proved a success.

VICTORIA.

PREFERENTIAL TARIFF RATES.

The parliament of Victoria has passed the following resolution:

That in obtaining machinery, goods, or material for the service of the State, the government shall, with a view to encouragement of our own manufacturers and producers, give substantial and effective preference to those manufactured or produced in the commonwealth; and further, that the prices and tenders for all machinery, goods, or material so obtained, which are manufactured or produced outside the commonwealth, shall be laid on the table of the house at the end of each financial year, or as soon thereafter as parliament meets.

By a recent decision of the minister of customs of Australia inland transportation charges to port of shipment will be added to invoices when assessing the value of goods for duty.

INCOME-TAX RATES.

The income-tax rates for 1905, payable at the end of the year, submitted and passed by the parliament of Victoria on the 19th instant, are the same as last year. The incomes from personal exertion are as follows:

Up to £500, 3 pence (6 cents) in the pound; £500 to £1,000, 4 pence (8 cents); £1,000 to £1,500, 5 pence (10 cents); over £1,500, 6 pence (12 cents). Incomes from property: £500, 6 pence; £500 to £1,000, 8 pence; £1,000 to £1,500, 10 pence; over £1,500, 12 pence. A person whose income during the year immediately preceding the year of assessment did not exceed £156 is not liable to tax.

Income of any company liable to tax (not being a life-assurance company: For every pound sterling of the taxable amount thereof, 7 pence in the pound.

Income of any company which carries on in Victoria the business of life assurance: For every pound sterling of the taxable amount thereof, 8 pence in the pound.

QUEENSLAND.

SUCCESSFUL AND PROFITABLE YEAR.

The past sugar season in the State of Queensland, the only State in Australia in which sugar is grown, has been a very successful one. The following gives the production of the State for the past eight years:

Year.	Under cane.	Crushed.	Manufactured.
	Acres.	*Acres.*	*Tons.*
1897	98,641	65,432	97,916
1898	111,012	82,391	163,734
1899	110,657	79,435	123,289
1900	108,535	72,652	92,554
1901	112,031	78,160	120,858
1902	85,338	59,102	76,626
1903	111,516	60,375	91,828
1904	120,317	82,741	147,688

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The crop for 1904, it will be seen, was the largest since 1898 and the second largest on record. The by-products consisted of 4,491,407 gallons of molasses and 260,289 gallons of spirits. Increased prices were obtained, being $61.04 per ton against $54.32 in 1903 on the basis of 94 per cent sugar. The return per acre amounted to $108.67 against $77.28 in 1903, the financial return to the growers being therefore very satisfactory.

The following shows the value of the sugar exports of Queensland during the past eight years:

1897	$3,314,271	1901	$2,761,393
1898	6,438,150	1902	4,549,982
1899	5,659,788	1903	3,148,294
1900	3,257,581	1904	6,120,226

NEW SOUTH WALES.

LAND FOR IMMIGRANTS—INDUSTRIAL CONDITIONS.

Vice-Consul Keightley, of Newcastle, reports that efforts are being made in New South Wales to devise ways and means for inducing desirable families to emigrate from Great Britain to New South Wales. With this object in view it is proposed to make liberal allowances of the Crown lands. His report follows:

The question of land settlement has been occupying the attention in a great degree of the public, the Parliament, and the press for some time past. Due doubtless to the pressure of public opinion, the Government has been making special efforts to give easier access to the land to suitable persons, and where Crown lands were not available or not of the right kind for closer settlement, have acquired private estates and cut them up into holdings of a size to suit the necessities of people of modest means. The terms of purchase of these farms are liberal and easy, and bona fide settlers are assisted in erecting their homes and farm buildings, fencing, and clearing by the Advances to Settlers' Board (a Government institution). It will therefore be seen that the genuine agriculturist is being well cared for by the present Government of New South Wales.

The land laws and the system of land administration in this country are by no means all they should be, but the present ministry seems imbued with the desire to improve both, and a royal commission in Sydney is now inquiring into the whole subject. This, it is expected, will lead to an entire remodeling of the system of taking up land and of the methods of administering the lands department. A good deal of comment has been caused recently by reports in the press of an exodus of New South Wales farmers to Chile. Upon investigation the newspaper statements were found to be much exaggerated. The facts seem to be that two or three men who originally left England for Chile, where they lived for some time, came to this country from Chile, and after remaining a while became dissatisfied, deciding to return to South America, and persuaded a few friends with their families to accompany them.

SALVATION ARMY EFFORTS.

The negotiations opened up by General Booth, of the Salvation Army, with the federal prime minister, with the object of securing

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easy terms of land tenure for 5,000 families desirous of emigrating from England to various States in the commonwealth, aroused keen interest throughout Australia. While few, if any, in the commonwealth fail to recognize the absolute necessity for a large and early increase in population, and consequently would welcome a big inflow of immigrants of the right sort, many look askance at General Booth's proposals. In the first place, it is contended that if these families are, as stated, of the industrious, thrifty, farming class, each family possessing sufficient capital to take up a farm and maintain itself until the land becomes productive, there is no need for them to lean on General Booth or any other charitable or philanthropic individual or organization, and that people of such a class, usually sturdy and independent, would not be likely to do so. If, on the other hand, they are of the wasteful and derelict kind with which the Salvation Army has had most to do, they are not wanted; and if the scheme is allowed to eventuate, great care will doubtless be exercised before embarkation is sanctioned by the agents-general for the different States resident in London in order to exclude undesirables.

Mr. Keightly, in a note appended to the foregoing report, explains that, in consequence of the adverse criticism of Salvation Army plans, General Booth has temporarily withdrawn his offer.

SHIPPING FACILITIES.

The State of New South Wales has appointed a commission, consisting of the president of the Sydney Harbor Trust, the chief traffic manager for railways, and the chief engineer for public works, all of Sydney, with the resident engineer for harbors and rivers, to inquire into and report upon the advisableness of increasing the wharfage and other accommodations and erecting grain storage sheds and elevators at Newcastle for the shipment of wheat and other products of the north and northwest districts of New South Wales. These products are to a very great extent at present carried over the Government railways past Newcastle, to be shipped at the port of Sydney.

The area of the State served by the Great Northern Railway is very considerable, and the wheat for shipment has therefore to be hauled unnecessarily a distance of 104 miles beyond Newcastle for the want of modern appliances to deal with it here. So soon as the report and recommendations which doubtless will accompany it are known I will advise you of the result. The board has already indicated its intention to recommend the provision of additional wharfage add the erection of sheds over certain wharves for the better protection of goods inward. It is quite possible that wharfage dues will be charged for this accommodation.

The railway rates per ton of 2,240 pounds for wheat over long distances to the terminal port of Sidney are, for 50 miles, $1.21; 100 miles, $2.02; 200 miles, $2.84; 300 miles, $3.08; 400 miles, $3.28; 500 miles, $3.45.

NEW ZEALAND.

"Statistical View of Fifty Years' Progress in New Zealand" is the title of a book recently issued in Wellington, New Zealand. It presents many interesting figures, dealing with the increase in population, agriculture and stock raising, trade, shipping, and also banking. The

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population shows a steady increase—from 37,192 in 1855 to 857,539 in 1904. In 1904 there were 453,992 males and 403,547 females. The births numbered 22,766, deaths 8,087, and marriages 6,983. In 1870 1,140,279 acres were under cultivation; in 1904, 13,868,074 acres. Stock raising also has increased. There were in 1904, 314,322 horses, 1,736,850 head of cattle, 18,280,806 sheep, and 255,320 hogs.

The value of exports increased from 1,339,241 pounds sterling in 1861 to 14,601,787 pounds in 1904, while the imports rose from 1,141,273 pounds in 1858 to 13,291,694 pounds in 1904.

INTERNATIONAL EXPOSITION.

AMERICAN MANUFACTURERS INVITED TO EXHIBIT.

Mr. Whitelaw Reid, American ambassador at London, has furnished the State Department a communication received by him from Hon. W. Pember Reeves, high commissioner for New Zealand, in which attention is directed to a proposed international exhibition to be held in that colony beginning November, 1906, and extending to April, 1907, and requesting that this exhibition shall be called to the attention of the people of the United States. The exhibition will be held at Christchurch. Its object is to demonstrate the resources and possibilities of New Zealand as one of the world's factors and its vast mineral deposits. New Zealand offers a splendid outlet for the manufactures of other countries. The imports of the colony for the past year, two-thirds of which were manufactured articles, amounted to £13,292,000, which is equal to about $65,000,000. The population of the colony is placed at 850,000. Manufacturers are urged to appoint representatives and to send such exhibits as will show the nature and finish of their work and which are suitable for so progressive a colony.

Special arrangements will be made with the steamship companies trading to New Zealand, whereby exhibitors will obtain special rates of freight on exhibits, and complete arrangements will be made for their reception and installation on such lines as will protect exhibitors from any excessive charges. All exhibits are required to be in the buildings by October 28, 1906. Applications for space may be sent to Hon. W. Pember Reeves, high commissioner, Westminster Chambers, Victoria street, London, E. C., or to the secretary of the exhibition at Christchurch, New Zealand. The ordinary charge for space will be at the rate of 2 shillings per square foot, the minimum charge being 1 pound 1 shilling. All packages intended for the exhibition should be marked "New Zealand International Exposition," together with the name of the exhibitor and the number of his allotted stand.

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AFRICA.

SOUTH AFRICA.

INDUSTRIAL ADVANCEMENT.

BIG FIELD FOR ELECTRICAL SUPPLIES—POPULARITY OF AMERICAN SADDLERY.

Consul Snodgrass, of Pretoria, Transvaal, furnishes several interesting reports on conditions in South Africa, which contain information that should encourage American manufacturers of electrical supplies to increase their efforts, and presents opportunities that may be profitably improved by manufacturers of harness of every description. In regard to developments in the electrical field the consul writes:

The year 1904 showed a decrease in the imports of leather goods of every description, the most marked decline being noticed in saddlery, the value being approximately but $425,000 against $1,500,000 of the previous year. This falling off was due principally to the large stocks of surplus military equipment thrown on the market after the war. Imports from America for the last month reported (May) show an increase of about $6,000. For the first half of this year the British trade increase indicates that 1905 will show better than the combined imports of the previous year. England controls about 90 per cent of the business in South Africa.

Yet one of the leading industrial publications of the Empire admits that while England monopolizes so large a share of the imports, it is equally true that American patterns are increasingly in demand; but it modifies its admission by stating that it is difficult to forecast the future. United States firms are said to be responsible for the introduction of a system that is gaining ground. It is that of exchanging new saddles for damaged or old ones and charging only a small extra sum on the exchange. Web harness is another line which Americans are putting on the market, but there is an impression that it will hardly stand the strain required, though it has not as yet been given a fair trial.

AMERICAN GOODS FAVORITES.

The British themselves admit that although the general demand is for the English model, those from the United States are growing in favor, and on the whole are of superior quality, the firms selling being anxious to keep up the reputation for quality which they have acquired.

In order to protect the home product, there is an expressed intention on the part of the Cape legislature to impose an extra duty on saddlery and harness. Against this the leading chambers of commerce in England are protesting strongly as diametrically opposed to British interests. The duty is 10 per cent ad valorem, and it is the purpose of the local governments to raise it to 25 per cent.

The cry for protection comes from the rapid declination of home-made goods. The up-country saddler, once a busy man, is being

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driven out of existence. He has already been reduced to a repairer of goods, in the making of which he had no hand. The cause is not hard to seek. In fact, it is the inevitable result of the flood of progress sweeping over the entire country. The primitive types of saddlery and harness, substantial but clumsy, which for a long time have been the pride of the Boers and the Colonials for the simple reason that nothing better was brought to their notice, are unmistakably losing their hold, for South Africa has set itself determinedly to work to keep abreast of the times and to have the very best and latest models. As purchasers will not pay the prices demanded by the local industry, and as the latter has been unable to respond satisfactorily either as to the supply of an article of up-to-date design or in price in competition with imported goods, the trade is going to the oversea manufacturer.

It will pay American makers to keep up the reputation of our goods by sending over nothing but superior articles. The British pride themselves upon the quality of their products, and the sentiment among the population from the fatherland is favorable to the purchase of the styles originating in London.

The large saddles used in the Far West might become very popular here among the Boers and Colonists, who desire an easy seat irrespective of its looks, and they might sell for use on the long, tiresome treks over the veldt. I have never seen a Mexican saddle in any of the colonies, the light, natty looking saddle with iron stirrups and small seat being used almost entirely by Boer and Briton alike.

AMERICAN GOODS IN ACTIVE DEMAND.

Africa, both north and south, is an important customer for electrical supplies of every description; and although the British firms have been capturing the majority of contracts, due to their being on the ground floor, it is evident that the United States can come in for a larger share of the trade by the prosecution of an energetic campaign and by having competent and forcible men in the field. Our trade has been falling off this year, the last month reported being May, in which there was a decrease in the shipments of electrical machinery from the corresponding month in 1904 of $2,800.

The great activity in the electrical trade is not by any means confined to South Africa, for in Egypt and other northern provinces large electrical problems are under consideration. As an instance, the Soudan Government is considering the introduction of an extensive electric tramway system into Khartum. Neither cables nor overhead wires will be used, the intention being to store the electric power in the cars. It is expected that the system will be extended to Omdurum. Public and private installations of the electric light on an extensive scale, electrical power, etc., are under consideration, and for years to come Egypt will be sending out orders to the firms whose names are kept to the forefront, so that it behooves American companies to keep their eyes open for that trade, which alone will run up into the millions. As the British are in control in Egypt, they look upon that field as part of their Empire.

DEMANDS MULTIPLYING.

In South Africa, especially in the Transvaal, the demands on electrical engineers are multiplying to an enormous extent, as the mines

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are running as never before since the induction of Chinese labor. There appears to be a feeling of optimism among the little cities, as well as among the larger ones, which is bringing about a large expenditure for utilities. Electrical hoists are being installed in nearly all the mines; electrical elevators (lifts) are being placed in many of the business houses and in the tall buildings of Johannesburg, and in nearly every town of any importance some large electrical project is either in hand or in contemplation. In the city of Pretoria, a place of 30,000 people, which has come to the front since the conclusion of the war like a boom town of the West, the citizens have been worrying along with a horse-car line which penetrates the center of the city and has perhaps 3 miles of track. The town council is arranging to convert it into an electrical system, at an outlay of several millions, it being the intention to lay 15 or more miles of track throughout the municipality, and also to connect the numerous suburbs lying within a radius of 5 or 6 miles. Here is a large contract that American firms might be looking up. There is more likelihood of them capturing it than contracts in other places of South Africa. This is due to the fact that its dominant Dutch element can not or will not be reconciled to England.

At Johannesburg several millions were spent in installing an electric tram system, but practically all the contracts were captured by representatives from Scotland and England. Most of the apparatus to be used was shipped by the ill-fated steamer *Clan Monroe*, which was wrecked near Cape Town some weeks ago, so that it was necessary to duplicate the order through the same firms. Had the Americans here been more watchful they might have been able to secure part of the contracts in the largest and most progressive city in South Africa. At Volksrust and Klerksdorp it has been decided to erect lamps, and I might go on multiplying instances in which electrical developments are being carried on.

If Americans care for this trade they will have to wage a war for it against the Britishers, who are on the ground and are in possession of the country. It will be difficult to wrest it from them. However, as America has captured the mining machinery trade on the Rand from all competitors, even under British rule, it can do likewise in the electrical field if the same amount of energy, concerted effort, and brains are expended as was laid out by the pioneers in the gold fields.

IRON AND STEEL.

EFFORTS TO EXPLOIT THE RESOURCES OF A CONTINENT.

Consul Snodgrass furnishes figures and facts about the efforts of enterprising Americans to get a firm footing in South Africa. He reports the establishment of an iron and steel mill at Zuurfontein and predicts large profits in its product, provided the company is able to make steel rails equal to those imported from England. The building of the mill described is believed to be only the beginning of a movement such as characterized the establishment of the iron and steel trade of the United States. The consul writes:

The Transvaal Iron and Steel Company, with a capital of $250,000, is the first project of the kind to find birth on the Dark Continent, the

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first essay of the company being to devote its attention to the manufacture of bar iron of almost every description, including angles, shoes and dies, tees, girders, small mine rails, bolts and nuts, spikes, and such other lines as may be in demand from scrap iron and steel now cast aside as useless. This is not a new idea, but is being carried out in every country which manufactures its own iron, some of the best and most popular brands being made in this manner. The new plant will be built at Zuurfontein, nearly midway between Pretoria and Johannesburg, on the South African Railroad, where a large ore bed has been purchased, which will be utilized providing it will be possible to secure the proper coking coal, the only kind now being produced coming from Natal and said to be not of a superior quality. Johannesburg is so situated that the freight from and to the coast precludes scrap from being exported, and the result is that it is mostly dumped as useless and has been accumulating for years.

LEADERS IN THE ENTERPRISE.

The leader in the new venture is a Pittsburg iron and steel worker of long experience who has optimistic notions as to the future of that business in South Africa. He has secured options over a large quantity of iron and steel scrap, his contract with the mines covering a period of years and controlling a sufficient quantity to last the new company five or more years. In the prospectus of the company it is estimated that the yearly accumulation of scrap in the Transvaal is almost sufficient to supply the requirements of the works on the estimated output, so that, with the quantity held under option and what is otherwise available, a regular output should be maintained. In addition to this it is the intention of the company to develop iron-ore areas as indicated above. The key of the whole position lies in the cheapness of scrap iron on the Rand, none of the contract prices exceeding $5 per ton, and averaging much less, whereas scrap iron and steel in England, where 90 per cent of all the iron and steel used in South Africa comes from, commands about $7.50, and in the protection afforded by freight and railage. Taking these two factors into account, it is estimated that a preference of over $40 a ton exists, subject, of course, to the difference in the labor cost per ton on the manufactured article. When it is remembered that the railway rate from Durban is about $28 per ton and from Delagoa Bay about $25 per ton, and the steam freight from $6 to $7.50, it will at once be seen how this preference is made up.

ESTIMATES OF COST.

It is proposed to lay down an American plant at a cost not to exceed $100,000, and to produce 20 tons per day of ten hours with one shift of men. The plant will comprise four mills—namely, one 9-inch, one 14-inch, one plate mill, and one sheet mill with arrangements for galvanizing and corrugating. A Siemens-Martin furnace will be erected and the installation will be completed by a forging department (steam hammers). The following estimates will be interesting to American iron and steel manufacturers:

Working costs for 1 ton scrap-iron, water, sand, coal, etc., $22.48; skilled and unskilled labor and all office and administrative charges, $17; total cost per ton, $39.48.

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Estimated profits: By selling finished iron at $58.44 per ton, the market is secured against the imported article, and a profit of $18.96 a ton is the estimate.

The company already claims to have secured some large contracts from the South African Railroad, controlled by the Government, providing it is able to make steel rails of equal grade to those manufactured in England. As a development of colonial industry, the scheme is an interesting one and will likely be given close attention by Americans in the same line, our trade in that widely growing field being practically valueless so far.

NEW OIL FIELD.

PETROLEUM DEPOSITS IN SOUTH AFRICA.

A member of the Inhambane Oil Syndicate, of London, that has been operating on the east coast of Africa since last February, says the indications point to the discovery of one of the largest oil-producing areas in the world. He suggests that a refinery be built at Delagoa Bay to which a pipe line may be laid from the interior country. There has been much discussion of late as to the possibilities of the oil industry in South Africa, but, as far as I can learn, the deposit is to be found in nothing but the shales, the sandstone being an unknown quantity here. There are no oil experts in the country, the mining engineers here having had no practical experience in oil. The public has been hoping for the opinions of some trustworthy specialist on the oil indications.

EFFORTS MADE TO SECURE OIL.

Ermelo, long regarded as rich in oils, has been found full of bright prospects. About a year ago an oil expert with intimate knowledge of the Scotch shale industry reported favorably upon the holding, and money was consequently spent upon its exploitation. A considerable amount of boring and shaft sinking to the depth of 535 feet has indicated a large area of shale-bearing ground, and it is thought the territory extends for many miles. In the first well bored the shale contained 60 gallons of crude oil per ton. Since the "strike," which does not seem of much importance to the man acquainted with the American oil fields, a supplementary report has been made on the territory, in which the engineer declares the shale is in every way equal, and in many instances superior, to the Scotch oil shale, so that he has no hesitation in guaranteeing a return of 75 per cent marketable products (burning and lubricating oils, petrol, candles, naphtha, and sulphate of ammonia) from the Ermelo crude oil. The shale underlying the coal is about 2 feet in thickness, being the same thickness as the coal layers.

The mining scheme is one of great simplicity, since the shale and coal will be extracted simultaneously and a large proportion of the latter will be available for sale. The engineer's report goes fully into the question of costs and shows a margin of profit of about $200 per 100 tons of shale treated, estimated on a comparatively conservative basis. The local market for the product is so large that a 500-ton plant would only meet 15 per cent of its demands.

In the matter of the outlay necessary to establish the works in this district, it appears that extensive developments will have to be per-

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formed before any oil-shale venture can be considered ripe for the commencement of producing operations. The nature of the beds is such as to favor cheap working, and a large extent of development can be accomplished at a comparatively low cost. So far it has been impossible to secure any accurate information of the Inhambane fields, the newspapers exploiting it as the "greatest in the world," but it is the opinion of the Americans here who have been more or less identified with the oil fields at home that the stories may be taken with a grain of salt, and that although South Africa's oil resources may be thoroughly exploited under the auspices of strong and vigorous controls, the American producer need fear no danger of competition from this quarter of the world.

FREIGHT RATES.

AMERICA'S EFFORTS TO REDUCE RATES INEFFECTIVE.

If America was unable to increase her exports to South Africa with a preferential rate of shipping, what will be the result now that the Prince Line, the only one plying between New York and Africa, has joined the combination and has almost doubled the rates between American and African ports? The British and South African Gazette, which always gives the helping hand to its own country, has devoted much attention to exposing what it terms "a popular fallacy," the theory that the shipping-freight war on the American-South African route, and the consequent disparity of rates prevailing from British and American ports, has exercised a heavy preference in favor of the United States manufacturer. This journal acknowledges that the majority of people, including a long series of witnesses who adopted this view at the last winter conference at Cape Town, can not be made to believe otherwise, yet a candid inquiry into the facts may lead to a different opinion. It points out that the American freight war has existed for three years, during which period American rates ruled at $4.80 and less, while the British were maintained at their normal standards, ranging between $7.20 and $10.88, yet the United States' share of South Africa's entire import trade compares disadvantageously with that of the United Kingdom at the present moment. In 1903 the latter stood at 61.5, rising last year to 62.4, while in the same period America's share fell from 12.8 to 9.7. In other words, it alleges during the latter two-thirds of the war period the alleged American preference has been incapable of utility, or, in the alternative, a serious reflection has been cast upon American shippers, which is inadmissible.

CAUSES FOR THE DECLINE.

The British journal contends that the great falling off of exported American foodstuffs was due to successful competition on the part of British possessions. "No doubt had the reverse been the case, the supposed freight preference would have been regarded as the direct cause, but under the circumstances it must be admitted that the incident of the low freight has not favored American trade, nor even served to check its serious downward movement, and the obvious inference is that the low freights constituted no preference whatever."

It further argues that no substantial American preference has been

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apparent in the trade which is directly competitive with the United Kingdom and other European countries generally. Last year a big slump occurred in South African trade and all exporting nations suffered; yet with a freight preference approaching 50 per cent in many instances, America's purely competitive trade showed a decrease in volume of 23.3 per cent since 1902, almost as great as the United Kingdom's shortfall of 26.6 per cent; and even the former's advantage of 3 per cent, so out of all proportion to the freight privileges apparently enjoyed, can be more than accounted for by the fact that the Britishers suffered especially in consequence of the retrenchment policy, which curtailed South African expenditures on large plants for public works of various kinds, for which the United States does not cater to the same degree.

THE UNITED STATES AND GERMANY.

Another point made by the Gazette concerning the effect of the freight war is the comparison of the United States trade with that of other countries, which, with none of the advantages enjoyed by Great Britain, offers a far more accurate parallel of circumstances. Thus it is found that during the past few years, according to the following table, the record of the United States corresponds very closely with that of Germany, a leading competitor, whose governmental and combined railway-shipping preferences have been in existence too long to be regarded as affecting a comparison merely covering the period of the American freight war. These figures, showing percentages of trade held by the competing countries, are noteworthy.

	1902.	1903.	1904.
United Kingdom	64.4	61.5	62.4
British possessions	12.5	9.2	13.9
United States	9 8	12.8	9.7
Germany	3.9	4.6	3.5
Other countries	9.7	11.9	10.5

It will be noted, in referring to the above, that the trade of both America and Germany rises and falls with almost equal proportion, and that the introduction of low freight rates from America has made no perceptible change upon the international trade record. If the American manufacturer was not on the qui vive during this most important period, he certainly must be alert from now on, as the freight combine has won the fight. Unless our importers enlist the support of some other shipping concerns, they will be compelled to work henceforth on the defensive. Yet the British are already beginning to note the finesse displayed by American manufacturers and exporters in diverting goods over the Canadian border, where they are shipped via steamers plying under a subsidy that lands the products at South African harbors at a rate as low and perhaps lower than the one established during the recent freight-rate war. I am told by a Johannesburg importer that he can secure his goods cheaper by purchasing in the Eastern States, paying railroad freights to a Canadian port, and there loading on a steamer that flies the flag of Great Britain, than in shipping direct from New York.

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FARM MACHINERY.

MODERN IMPLEMENTS WANTED IN SOUTH AFRICA.

Consul-General Washington, of Cape Town, furnishes a very comprehensive and instructive article, taken from the South African Trade Journal, on the necessity of introducing modern machinery and equipment into that country for use by the fruit farmers and packing houses. The article in part says:

Chief among the branches of work which have felt impetus and which are thoroughly established in certain districts of Cape Colony and on the coast belt of Natal, is that of fruit farming. The need of the fruit farmers is proper equipment with machinery and plants to enable them to enter into commercial competition with the large fruit industries of Australia and the United States.

For practical purposes it is only necessary to examine Cape conditions, and it behooves manufacturers of machinery and implements adapted for use on a fruit farm to see that horticulturists of Africa are shown the advantage of up-to-date equipment. Electricity is the coming motive power in all South African industries, but, as the necessary current is not likely to be obtained in the rural districts for years, it is necessary for the farmer to set up his own generating plant or to adopt gas. Possibly in well-farmed districts a central electricity generating or gas-producing station could be established for the common supply, but, in any event, there must arise a demand for power equipment, boilers, engines, dynamos, etc.

In order to utilize every possible mechanical means for obviating handling in picking or jolts or jars in carriage over the many miles which often separate orchard and packing house, it is necessary that light tramways or a monorail system be constructed. At present narrow-gauge lines traverse miles of orchards, forming main carriage arteries which are served at central points by the ordinary California fruit wagons. The trams used are large bogey trucks, moved by a team of mules, and a large quantity of fruit is handled without damage, though it is doubtful whether electricity might replace mule traction even though it was obtained cheaply.

In addition to efficient mechanical traction, any novelty of real utility, such as wire-caged pickers, pruning instruments, or the latest implements in grading, paring, coring, and slicing, could readily be sold to the hardware dealers of Cape Town and other places. And what is true of Cape Town and other parts of South Africa is true of Australia and other new countries that have gone into or are going into extensive fruit raising.

RESULTS OF DIRECT STEAMSHIP COMMUNICATION WITH CANADA.

There has been a remarkable growth in the Canadian trade with South Africa, since the granting of an annual subsidy by the Canadian government in 1901 that admitted the inauguration of a direct line of steamers to ports of this country. It is remarkable in that an increase of about 8,000 per cent (from a small trade represented by about $27,000 to the respectable figure of over $2,225,000) was shown in the year following the establishment of the Canadian-South African steam-

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ship service. The annexed table shows the value of exports from Canada to the Cape and Natal, respectively:

Year.	Cape.	Natal.	Total.
1901	$25,214	$1,601	$26,815
1903	1,190,902	1,037,705	2,228,607

In 1901 there was no subsidized line of steamers running from Canada to South Africa, as was the case in 1903. It may be observed that this advantage may work against not only American trade in South Africa, but in Canada also, since it is now suggested that this subsidized line may well be used to carry to Canada cargoes of wine and fruit to compete with the American product in that market.

A trade report received here from New York, dated August 1, 1905, quoted the rates for the next direct steamer from that port to Cape Town as not exceeding $6.70 per ton; to East London and Durban, $7.91, and the September sailing from Montreal at $4.26 for Cape Town and Port Elizabeth, and $4.87 to East London and Durban.

AMERICAN GOODS IN SOUTH AFRICA.

The consul-general furnishes the following list of importers and traders in American goods in Cape Colony and Natal:

Cape Town.—Books and stationery, Burmester & Co., Cape Times.
Drugs, Heynes, Mathew & Co., Lennon & Co.
Dry goods and shoes, Stuttaford & Co.
General importers, Alford, Wills & Abbott, William Spilhaus & Co.
Groceries, J. D. Cartwright & Co., D. Craik.
Hardware, African Tool Company, Bull, Sellar & McIntyre, George Findlay & Co., Kock & Dixie, R. M. Ross & Co., Woodhead, Plant & Co.
Motors and bicycles, Garlick's Motor and Supply Company.
Wall paper and paints, Gustaf, Anderson & Co.
Durban.—Boots, shoes, and leather, Anderson Brothers, F. M. Banfield.
General merchandise, Butcher & Sons.
Groceries, Barsdorf & Co.
Hardware, Alcock & Co., Dickinson & Fisher.

EAST AFRICA.

EVIDENCES OF VALUABLE PETROLEUM DEPOSITS.

Consul-General Hollis, of Lourenço Marquez, reports indications of the existence of petroleum beds in Portuguese East Africa, of which preliminary surveys have been made and for the exploitation of which a syndicate has been formed. He writes:

Some years ago a few business men of Inhambane had their attention drawn to a peculiar deposit which incrusted the shores of a number of small lakes in the Nhangella Valley, which lies about 50 miles

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south-southwest from the port of Inhambane. This deposit or crust had been formed by the action of the wind blowing over the lakes, the surfaces of which were generally covered with thick layers of iridescent grease which was forced toward the shores where it became mixed with fragments of grass and leaves and sand. This crust was quite hard, several inches thick, burned readily, and had long been used as fuel by the natives. It burned with a bright flame and gave off a thick dark smoke, smelling very much like the smoke from burning kerosene.

Some geologists and chemists, to whom samples of the crust were submitted, pronounced it to be either elaterite or ozokerite, and reported that its specific gravity was 0.80, and its melting point 61° C. The soil in the neighborhood of the lakes is of fine sand, and the whole country shows evidences of having been at one time in the remote past covered by the Indian Ocean. Some prospecting showed that an extensive layer of limestone existed under this surface sand. With these facts before them the discoverers of this deposit endeavored to interest Johannesburg capitalists, and after persistent endeavors a syndicate was formed to more thoroughly prospect the country. Engineers were sent to the region to report upon its oil-bearing possibilities, and eventually a number of companies were formed, which took over considerable areas, under mineral concessions from the Government, and started drilling for oil. The latest news from this region is that some of the drills are down into the hard capping which is supposed to overlap all petroleum-bearing rocks, and that the operators are now awaiting the arrival of special drills with which to bore through this capping.

PIPE LINE PROPOSED.

If petroleum is found in payable quantities (and all of the engineers and geologists who have examined the fields are confident that it will be found) it is intended to convey it by a pipe line to Lourenço Marquez for final treatment, shipment, and sale, as the shallow harbor of Inhambane, with its shoal channel across the bar, does not lend itself to any large commercial transactions of this sort. This pipe-line proposition, however, is strenuously opposed by some parties as being impracticable. Whether or not it is practicable will be determined later on. Here in Lourenço Marquez, however, there are plenty of good sites for refineries and for contiguous docks to serve them, and up to which vessels drawing from 27 to 30 feet will be able to safely proceed.

THE WORLD'S PRODUCTION.

According to recent statistical statements published in the Bulletin of the Commercial Geographical Society of Paris, the world's production of petroleum was divided as follows: United States, 15,000,000 tons; Russia, 10,600,000; Sumatra, Java, and Borneo, 1,000,000; Roumania, 496,000; the East Indies, 404,000; all others, 250,000. Astonishment is felt in regard to Roumania's rapid increase from an insignificant position to one which, if it goes on increasing, will enable it to compete with Russia. The Russian papers are somewhat surprised at the presence of a rival so near their borders. The production of 1904 was more than 3,000,000 tons larger than that of 1903. The yield of 1905, because of the terrible losses in Russia, will hardly reach that of 1903; indeed, it may be much less than for any year in

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the last ten. The effect on the petroleum markets will be felt in many parts of the world, for petroleum has long been regarded even by remote regions as a necessity.

WEST AFRICA.

SIGNIFICANT TRADE CONDITIONS IN THE WEST.

Vice-Consul Dougherty, of Freetown, Sierra Leone, Africa, writes:

The affairs of the British colonies in West Africa were recently under consideration in a conference of their governors in England. Industrial and commercial interests received due attention. This means much for trade in West Africa, since a closer relation between these thickly populated fertile tropical countries will cause an increasing interchange of the most progressive measures promulgated in each, and thus all will be benefited. The building of new docks and better wharves, and the extension of railways, as planned, will stimulate domestic and foreign trade. Sierra Leone trades mostly with the mother country. However, the report of imports and exports for 1904 indicates some significant conditions. In that year the imports of Sierra Leone from England decreased 3.7 per cent; from France, 60 per cent; from Belgium, 70 per cent, and from Spain, 6 per cent. Those from Germany increased 9 per cent; from Holland, 22 per cent, and from the United States, 19 per cent. The imports from the United States were one-tenth of those from England, five-eighths of those from Germany, five times those from Holland, and fifteen times those from France.

ADVANTAGE OF DIRECT STEAMSHIP LINE.

The excellent steamship communication between Sierra Leone and Europe favors trade with the latter, while direct communication with the United States is only through American sailing vessels. When this hindrance to trade with America is considered the excellent showing of the United States is the more significant. It means that the people of Sierra Leone favor American goods. At present there is a good opening for a substantial American firm to do business in Sierra Leone.

The following are some of the main imports of Sierra Leone: Wearing apparel, cotton goods, woolen goods, haberdashery, provisions, flour, salt, sugar, kerosene, hardware, lumber, and tobacco.

Following are the main exports: Palm kernels, palm oil, Kola nuts, ginger, rubber, gum copal, piassava, pepper, ivory, rice, and coffee.

ABYSSINIA.

TRADE DEVELOPMENTS.

FEW COMMERCIAL CHANGES—AMERICANS UNEQUAL TO DEMANDS.

Consul-General Skinner, of Marseille, replying to inquiries from parties in the United States as to tangible results arising from the expedition of 1903–4, of which Mr. Skinner had charge, writes that

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there is plenty of room in Abyssinia, the Southern Mediterranean coast, and the Persian Gulf for American commercial enterprise, and furnishes an interesting report covering topics suggested by his correspondents. The consul-general says:

So much of mystery still clings to Ethiopia that commercial relations with that friendly independent African State acquire a special interest and give rise to a good deal of misinformation. Now, as heretofore, the United States supplies Ethiopia with its principal article of import—cotton cloths—and takes up large quantities of its exports, which reach American ports by indirect routes. No material changes in the commercial conditions have taken place since 1903, when the railroad was opened from the coast to the frontier and was then held back by complicated political considerations. When the powers will agree with the Emperor upon a plan of procedure nobody can foretell. In the meantime there is no "growing importance of Abyssinia," nor can there be, and it is a mistake to suggest that a great actual development is taking place. A vast empire like Ethiopia without a railroad is tied hand and foot as far as the extension of export and import trade is concerned. Unquestionably the railroad will be built, unquestionably Ethiopia is very rich in natural resources, but very little has actually been done to develop them, and young men without capital who go to that country hoping to make fortunes rapidly are in danger of great disappointment.

AMERICAN EXPORTERS DERELICT.

The American mission sent to Ethiopia in 1903 had for its object the creation of conditions upon which our commerce could expand naturally and without danger. A treaty was negotiated and American exporters can profit thereby in proportion to their individual enterprise and as the opening up of the country advances when the much to be desired railroad is extended. It is gratifying to know that a direct result of American effort in Abyssinia has already brought Harrar firms into direct contact with American exporters, thus eliminating middlemen, reducing prices to consumers, and in that manner increasing the purchasing power of the people The importance of this achievement is less in the fact itself than as a faint indication of a willingness on the part of some American firms to work out the details of business in far-away lands. My correspondents all complain that American exporters will not quote c. i. f. prices. I can see no reason for this attitude. It is perfectly possible to ascertain the cost of laying down goods at Djibouti and to add the cost to f. o. b. prices. It is discouraging to undertake to pave the way to an actual contract, only to find the exporter liable to be benefited unwilling to assume the mere labor of connecting together the elements which make up the cost of the delivered merchandise.

GERMANS AND ITALIANS ACTIVE.

While certain American firms have shown commendable interest in securing connections in Ethiopia and elsewhere, I am not aware that any of our actual manufacturers have done so, and I am informed on the other hand, that German and Italian concerns appear to be actively

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working to displace with their products the cotton goods which we have exported for many years. It is improbable that they will secure any very striking success with cotton goods, but the fact that efforts are continually being made in this direction is worthy of being carefully noted. My correspondents at Harrar, themselves large importers, write to me that Manchester and Italian sheetings are being sold at this moment at lower prices than American fabrics, and they provide me with samples of these goods, which I forward under separate cover to the Department of State. My correspondents add:

"We find continual difficulty in increasing our direct relations with the United States, because we instruct American firms to draw upon us through the Aden Bank, while they wish to secure payment at London. Nevertheless, we intend to persist, and we shall be successful next year in doing a large business with the United States. You will be interested in knowing that a company has secured an imperial concession to grow rubber in the province of Kaffa, the style of which is the Cordufan and Khartoum Company."

FAILURE OF AMERICANS TO REPRODUCE.

These same correspondents have been endeavoring for a considerable time to secure in the United States small glass decanters, for which there is a large and steady demand throughout Ethiopia. Thus far American correspondents have been unable to reproduce the sample except at prohibitive prices, and have proposed a substitute decanter of the same dimensions, but with a seam on each side left by the mold, and offered f. o. b. New York. A Bohemian firm has now taken up the subject, and is offering my correspondents exactly what they require c. i. f. Djibouti, net. Indeed, the striking difference between German and American methods of initiating new business is, that the American as a rule desires to dictate his own conditions while the German is prepared to accept the terms of his prospective buyer.

Owing to the inability of American manufacturers to duplicate certain lines of cotton goods required in great quantities in Morocco, I am unable to report any practical progress as a result of previous reports made on this subject. I can not do better in this connection than to translate in full two letters addressed to me by a French company of 3,500,000 francs ($675,500) capital, and with very extensive ambitions as regards Moroccan trade. The correspondence follows:

"I have been unable to go to America, but, faithful to my project, I still desire to secure relations with your country. I must say, however, that I am extremely disappointed as regards sheetings and ecru cotton fabrics. It has always seemed to me that this article, now imported almost exclusively from England, and in enormous quantities, might be provided very easily by your compatriots, but it proves to be the case that it is easier to obtain what we require in England, inasmuch as Morocco demands loaded fabrics, which are a Manchester specialty, while the American fabrics are entirely pure. The unloaded fabrics we can not use in Morocco, however good. If the British can make what the African market requires, you should be able to do the same. Can you not indicate one American mill susceptible of offering cottons charged with gum or lime or whatever the material happens to be?"

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USELESS TO THEORIZE.

To this letter I suggested that, however conservative the native buyer might be in regard to changing the class of goods to which he was accustomed, he might in the end be induced to see the greater desirability of the honest American wares which our manufacturers produce. In reply to this letter came the following:

"I am absolutely of your opinion as to the preference which ought to be given to a product absolutely pure, but in the case of these charged sheetings we have to deal with a custom existing in Morocco and which will require a very long time to eradicate. The native does not buy these charged tissues simply because they present a fine appearance, but because they are stiff and white and are not washable. The American sheeting on the other hand is soft and ecru in color. In short, it is useless to theorize, because the plain fact is there is slight probability that the Americans or the French can succeed in establishing a market until they determine to make the goods which our English furnishers already make. As to prices I have not studied them, but I have no doubt that American prices will be lower, other things being equal."

A VITAL DIFFICULTY.

I am not prepared to say that our manufacturers are not right from the commercial as well as from the moral point of view in refusing to adulterate their goods; yet, on the other hand there appears to be some ground for believing that in the Moroccan market at least the actual buyers prefer the adulterated goods, knowing full well that they are adulterated. If American exporters desire to secure this business through existing instrumentalities, they must furnish what the wholesale buyers require. There are other African markets where our sheetings have made progress against Manchester goods, precisely because they are soft and genuine. The vital difficulty is that our manufacturers are dependent upon foreign middlemen to provide them with this business, and it is useless to theorize or moralize with foreign firms which know exactly what they require and are prepared to buy in Manchester if they can not secure identical goods in New York.

From still another French buyer of cotton goods, with headquarters in Marseille and important establishments at Zanzibar and Mombasa, I have this communication, written October 30:

"I beg to advise you that I addressed myself immediately to the American houses whose names you provided in your letter of June 5 last. The house of ———— informed me in reply that they sold goods only through their commission firms. We asked for the addresses of such firms with whom we might correspond and received in reply the name of one which is simply one of our habitual furnishers in New York. I wish to remind you that it was precisely to avoid the necessity of working through the onerous intermediary of a New York commission house, being myself a commission merchant, that I desired to treat directly with American manufacturers."

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EGYPT.

PROMISING PROSPECT FOR AMERICAN PRODUCTS.

Mr. A. A. Fendian, an American citizen who has been established in Egypt for a number of years in the business of importing American products, has written a letter to the Department of Commerce and Labor in which valuable information is furnished regarding oriental commerce in general and that with Egypt particularly, and in which the prospects of promoting business between that country and the United States are discussed. Mr. Fendian writes as follows:

Egypt is a country of no manufacturing industry, but very rich and prosperous by reason of its climate and products. Cotton and other products of agriculture are very flourishing and constitute the principal exports of the country. Concerning the imports, there is no country that I know of that promises so well as Egypt; there is money and prosperity in this country now and more coming; there is hardly a line of goods that can not be sold here. Agricultural machinery and implements can be sold in enormous quantities, and there is a large market for hardware, textiles, etc.; even luxuries find a good market in Egypt.

CAUSE FOR PARALYSIS.

Now, as to the reason why American commerce is paralyzed and European commerce is extending greatly, the causes are the following:

Credit.—There are no American manufacturers who sell on credit. They even make difficulties in selling goods payable at destination against delivery of shipping documents. American manufacturers insist upon always being paid in New York in advance and sending the goods afterwards.

Difficulties of shipment.—Another obstacle is the absence of a permanent service of ships touching Alexandria, goods taking sometimes from three to four months to reach Egypt.

Representatives.—American manufacturers do not accept any representative; they consider an agent like a direct buyer. They simply designate a New York commission house, through which all their export business is made. These commission houses send once or twice a year a traveler to the Orient, who does not know the market or the language and can not secure any considerable share of the business that a local representative can procure for the factory all the year round. American manufacturers could sell twice as much by appointing a local representative in every country. On the contrary, European manufacturers allow credit, they have direct steamship services, and they appoint their local representatives and travelers. In this way they are selling even at higher prices goods that are not so well made as American.

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MADAGASCAR.

AMERICAN MACHINERY WANTED.

Mr. P. H. Golaz, a leading merchant of Tamatave, Madagascar, desires to purchase in this country mining machinery, and in a letter to Consul Hunt makes that fact known. Mr. Golaz wrote the consul as follows:

I have the honor to ask you to put me in correspondence with some firms in America who make a specialty of mining machinery and to request them to send me catalogues illustrating their machinery, together with all necessary information which will enable me to make the choice and purchase I intend making of all the necessary machinery for crushing gold quartz.

Consul Hunt adds that Mr. Golaz is a reputable merchant and is likewise engaged in the mining industry. Letters should be addressed to Mr. P. H. Golaz, Tamatave, Madagascar.

Baku Oil Troubles.

Vice-Consul Stuart, of Batom, reports as follows regarding recent troubles in the Baku oil district:

The Petroleum Producers' Association, at a recent meeting, decided to immediately recommence work on the Baku oil fields, the governor-general having undertaken to provide troops for protection of life and property. In view of this decision, the Baku branch of the Russian Technical Society, to which most of the civil engineers employed on the oil fields belong, resolved that although the situation could not as yet be considered free from danger, nevertheless they declared readiness to resume their duties. In consequence of the foregoing, I understand that a few days ago work was generally resumed on the oil fields. Pumping has been started, derricks which had been destroyed are being reerected, and machinery is being repaired and renewed with all possible speed.

Relief for Russian Peasants.

Mr. Spencer Eddy, chargé d'affaires at St. Petersburg, has furnished the State Department with a copy of a manifesto recently issued by the Emperor granting Russian peasants facilities for the payment of arrears due for land. That portion of the manifesto reads as follows:

1. That the purchase or redemption payments due from peasants to former proprietors of estates, as well as to the Government and district, shall be reduced, beginning January 1, 1906 (Russian style) by one-half, and that from January 1, 1907, these payments shall be stopped altogether.

2. That the Peasants' Agrarian Bank is to be enabled more successfully to assist those peasants who possess little land to extend their land possessions by purchase, this to be done by increasing the funds of the bank and establishing more favorable regulations regarding the issuance of loans.

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NORTH AMERICA.

THE DOMINION OF CANADA.

INDUSTRIAL AND COMMERCIAL EXPANSION.

CROP PROSPECTS IN THE NORTHWEST—INTERNAL AND FOREIGN TRADE.

Consul-General Holloway, of Halifax, furnishes an interesting report on the industrial and commercial movement going on in Canada. He describes possibilities that seem almost incredible, and says the wheat fields under cultivation will yield 100,000,000 bushels this year, and 1,000,000,000 bushels within the first half of the present century. These estimates, however, are thought to be the exaggerated ideas of men who are personally interested in giving Canada the brightest prospects possible. It is only fair to say that examinations made by English and other experts put the probable, if not possible, yield of the future at less than 400,000,000 bushels. After all, estimates of this kind can never be much better than guesswork, for nobody knows what the laboratories or experimental stations of Canada, this country, and Europe are going to do in or for the development of the world's wheat fields. The report will repay reading, however, not so much for what it says as for what it suggests. Canada is rich in all kinds of resources. It has already made decided progress in manufactures and commerce. It is eager to extend these. Consul-General Holloway's report fairly supplements the comprehensive report of Special Agent Pepper, published last month. It follows:

The question of Canadian expansion is uppermost in the minds of all Canadians, growing out of the rapid settlement of their northwest territories. The provinces of Alberta and Saskatchewan, the former with an area of 250,653 and the latter with 243,192 square miles of splendid land, a larger area of cultivable land than any of the older provinces, began their existence on the 1st of September, 1905. They are as fertile as Manitoba, and are four times the size of that famous wheat-growing province. It is estimated that these provinces will produce between ninety and one hundred thousand bushels of wheat the coming year, and the northwest provinces and territories a thousand million bushels annually within the memory of men now living. The land is pronounced equal to that of the great ranching districts of California. Alberta woolgrowers are already large producers of a good staple. Coal and other minerals exist and are being rapidly developed. Saskatchewan is reached by six railroad lines from Manitoba and by one from the United States, while Alberta is already served by three of the Canadian Pacific lines and one from the United States.

The rapid manner in which these territories and new provinces are being settled is the source of great satisfaction to all Canadians. Most

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people seem to be of the opinion that a single row of provinces from east to west, bordering on the United States, exhausts the inhabitable area of the Dominion. This is erroneous. There is a large area of habitable territory still north into which lines of railroads are being pushed clear up to the Arctic Circle. The northern boundaries of the existing Canadian provinces are nearly all within the fifty-fifth parallel of latitude, British Columbia alone running up to the sixtieth parallel. Most of Norway and Sweden, all of Finland, and a large part of Russia lie north of the sixtieth, helped, however, by the Gulf stream.

RAILROAD EXTENSION.

The large earnings of the Grand Trunk Pacific during the past year, exceeding $50,000,000 and probably to be exceeded in 1906, has given an impetus to railroad building only equaled by that of the United States in its most prosperous years. It is claimed by prominent railroad managers that the past year's business of the Canadian Pacific proves that that road has nothing to fear from the new Transcontinental Railroad. The company is building two 20-knot steamers for the Atlantic service and has set aside $7,500,000 to provide additional locomotives and rolling stock, all of which indicates that the Canadian Pacific looks to a large expansion in transcontinental traffic. That is the pioneer of Canada's transcontinental railways. The part it has played in the development of western Canada is freely acknowledged by all Canadians, who are proud of its progress and confident that it will achieve still greater things in the future.

There is no question concerning the possibilities of British Columbia, and the managers and promoters of some of the most successful railroad systems of the world are now locating two lines to cross the continent to the Pacific through belts of territory north of the Canadian Pacific's territory above the present line of the provinces. They will contribute largely to the development of that territory, which is bound to increase the bond of sympathy between the two English-speaking nations of North America and to make them still more agreeable neighbors as well as perpetual friends. The Canadian Pacific is so closely identified with the growth of Canada that it is regarded as almost a national enterprise. Every phase of the system's development is looked upon as a reflection of the expansion of Canada's trade and commerce. The statement of the freight is an index of the country's progress in agriculture and manufacturing. There was an increase of 7,000,000 bushels of grain carried to the seaboard last year as compared with the previous year. Live stock alone showed an increase of 50,000 head. Lumber traffic increased about 170,000,000 feet. Manufactured articles increased by 130,000 tons, and what is designated as "all other articles" increased 270,000 tons. The number of passengers carried during the year was 6,891,511, compared with 6,251,471 in 1904.

STEEL-RAIL INDUSTRY.

Rapid as has been the development of the steel-rail industry in the Dominion it has not kept pace with the demand for the product which comes from railroads in Canada and abroad. The Sydney plant was recently compelled to refuse a large order from the Chinese Government, because the mills were employed supplying the domestic demand.

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The Grand Trunk Pacific has just placed an order with this company for $4,000,000 worth of steel rails for the new Transcontinental. It it estimated that 500,000 tons of steel rails will be required to lay the Transcontinental from Moncton to the Pacific coast. There are two steel-rail mills in Canada, each with a capacity of from 300 to 350 tons a day. It is stated that the Canadian Pacific uses on an average about 40,000 tons of rails for renewals every year and the Grand Trunk about 25,000 tons. It is probably within the mark to say that 100,000 tons of rails are used by the railroads in Canada every year for the extensions of existing lines. If the mills can manufacture only 150,000 tons a year there would be left, after the present railroads are supplied, only 50,000 tons for the new road. At that rate it would take ten years to supply rails to complete the Transcontinental road.

LOOKING TO THE ORIENT.

For some time past there has been a tariff discrimination against Canada, which was a serious obstacle to trade with Japan, but the Canadian government has now completed arrangements with Japan for the removal of this discrimination, and Canadians are no longer at a disadvantage. The long railway haul to the Pacific coast will no doubt make it somewhat difficult for most of the manufacturers of eastern Canada to export extensively to Japan, but the manufacturers of British Columbia will be in a peculiarly advantageous position for trade with their neighbors across the ocean.

RAILWAY ACTIVITY.

Great activity in railway building and allied industrial movements is reported from British Columbia. Two great railways, the Canadian Pacific and the Great Northern, are rapidly extending their lines and competing with each other in the opening up and developing of the country, and wherever they do the pioneer work big opportunities are developed. The Canadian Pacific is constructing a branch line from Spences Bridge southeastward to Nicola, a distance of 60 miles. This road will give access to a region rich in minerals and will open up much fertile land especially adapted to fruit culture. Another company is constructing a line from Midway on the Boundary of Vernon. This will follow the waters that flow from Okanagan Lake to Penticton, at the foot of the lake, then follow its shores to Vernon. At Midway it will connect with the Canadian Pacific, so that shipments from the most productive fruit-growing district may be made to the prairie country in the North-West territories. Direct shipments will be made by this line to the coast. It will also connect with the Great Northern line, opening an outlet for produce to Spokane and eastward. The Great Northern Railway is constructing an extension of its Kettle River line from Grand Forks to Franklin Camp, 45 miles distant. This road will open one of the richest mining districts in the Province.

McKenzie and Mann are preparing to let the contracts for an extension of their system from Garneau Junction to Quebec, a distance of 12 miles. It is to be completed by September, 1906. The same system has been connected with their Montreal and Quebec line by the new Quebec bridge. They have begun the work on the Nepigon railway, which will be the supply of the new line during its construction.

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They will extend to the Nepigon Lake, when a line of steamers will be put on, and for 40 miles beyond the lake the line will be built to reach the Grand Trunk Pacific. This road will open up rich mining lands where iron is abundant, and the ore will be carried to the company's blast furnaces at Port Arthur.

NEW STEAMSHIP LINE.

As Toronto is to take a larger interest in the development of the adjacent country, it will want facilities for its work. To secure these it will have to provide the machinery for moving the vast crops that are expected. A new million-dollar steamship line for Toronto is one of the developments of the big grain crop in the Northwest. The promoters have accepted bids for two steamships at a cost each of $150,000 and advertised for bids for two more. The company will be known as the Mathews Steamship Company. The tenders stipulate that two ships shall be ready to cross the ocean next May. Besides these, two others are wanted for next season. The head office of the company will be at Toronto. The steamers will be of full canal size. They will carry general freight from Montreal to Fort William and call at Toronto on their westward trips.

RAPID INCREASE IN PRICE OF LANDS.

The prices being paid for lands in Canada may be taken as an indication of progress and prosperity, and they doubtless would be did not dubiousness of the future fill the minds of the best informed. Still the prevailing prices indicate present prosperity if not future security.

The advance made in the prices of Canadian Northwest land in the past few years were:

Year.	High.	Low.	Year.	High.	Low.
1897	14	2	1902	150	30
1898	15	8	1903	290	230
1899	19	14	1904	300	280
1900	20	15	1905	396	.....
1901	30	16			

THE FISHING INDUSTRY.

Fishing ranks among the most interesting and important of Canadian industries. It furnishes employment to a great many people, supplies the world with a large share of that form of food, and yields to the soil in its by-products splendid fertilizing material. No one need be surprised, therefore, to find it the object of a great deal of care and solicitude to Canadian statesmen and economists. In this connection Consul-General Holloway says:

There has been considerable disappointment in the fish business, which has been dull. Still, prices have been higher. Bait has been scarce, owing largely to the ravages of the dogfish. These, if permitted to increase, would have destroyed fishing in the maritime provinces within a few years, but the work of extermination is being prosecuted with vigor. The Dominion government has established a

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dogfish reduction plant at Canso as well as at Shippegan, which are grinding from 5 to 10 tons per hour, fishing schooners keeping them in good supply, the government paying fair prices for the fish. It has not been ascertained whether the oil can be marketed as yet, but there seems to be no question as to the value of the ground carcasses as fertilizers. The fishermen of Kings County recently held a meeting and asked the department of marine and fisheries to establish a reduction plant at that place. The dogfish are easily caught, and the fishermen are reported to be earning satisfactory wages by furnishing the same to the government.

The United States is interested in clearing the Atlantic coast of the sea pests and has sent two representatives, Doctor Field and Doctor Delano, of the Massachusetts fisheries commission, to examine the Canadian plants. These gentlemen have visited the plant at Canso, as well as the establishment of Mr. Baker at Fourchu, which is canning the fish for food. They are satisfied that they can be introduced into foreign markets, as the food is reported as palatable and good. A correspondent of the Halifax Chronicle, in referring to the canning of dogfish, says: "The much-abused dogfish are coming to be as well spoken of as cod, haddock, and other varieties of fish. This is not because of its food qualities, but because of their money value to fishermen."

UTILIZING DOGFISH.

Owing to unusual scarcity of bait, cod fishing has been very poor and the fishermen turned their attention to dogfish and have made fair wages. A ton of this fish, hitherto useless except as a fertilizer, is landed by two men in a short time. The present reduction works can not begin to take care of all the fish which are delivered daily. The consequence is that the fishermen can only fish a few days of the week. In addition to the deliveries of local fishermen at the reduction works, several schooner loads have been sent from Port Hood, Harbor au Bouche, Whitehead, and farther west. The manager has had his hands more than full in trying to handle all the fish that have been delivered. The department is of the opinion that a market will be found for the canned dogfish, but will erect no more reduction plants until that question has been fully determined.

RICH IN MINERALS.

Canada, like the United States, is exceedingly rich in minerals—mines of all kinds are being opened. Among these copper takes first place. According to Consul-General Holloway, discoveries have been made that are bound not only to excite great interest in the copper world but are destined to do incalculable mischief if the yield is to be anything like that promised, before a readjustment of the markets is possible.

Full returns of the lead production in British Columbia during the fiscal year 1904–5 and the bounty paid by the Dominion government are at hand. The returns of shipments to the Canadian reduction works at Trail from July 1, 1904, to June 30, 1905, show that the St. Eugene mine produced 6,247,508 pounds of lead and the North Star 2,082,903 pounds. The total shipment of the Province was 29,874,756 pounds. The total lead produced and treated amounts to 33,730,546 pounds and

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the bounty to $240,288. The amount exported was 21,972,988 pounds, on which the bounty paid was $96,579. The leading lead producers and bounty earners were the St. Eugene and North Star mines, located in southeast Kootenai.

THE COAL TRADE.

Coal production statistics for the first six months of the current year, from Nova Scotia, show a slight falling off as compared with the returns of the corresponding period of 1904, or 1,852,236 tons against 1,896,711. Less interest is being manifested in coal mining each year. Heretofore coal mining in Nova Scotia has been largely surface mining and has given good returns, but now mine owners are turning their attention to deep mining. Owners of iron and coal properties continue to explore and develop their properties. The late discovery of the 37 to 40 foot vein at the Allan shaft has contributed to the confidence of persons identified with that industry.

MICA, ASBESTOS, AND ZINC.

Dr. Eugene Hannel, superintendent of the mines branch of the department of the interior, has completed the first of a series of publications on the economic minerals of Canada. The report deals with mica. Canadian mica mining, experts say, has now reached such proportions as to entitle it to a prominent position in the mineral industries of the Dominion. Doctor Hannel, speaking of the future possibilities of the mica fields of Canada, says the outlook for the production of a large tonnage is very bright, and if Canada should ever be called upon to furnish the world's supply the mica fields of Ontario and Quebec could be prepared for such an emergency.

Doctor Hannel has also issued a report on asbestos, in which he says Canada has become master of the field of export. The United States has, so far, been the largest buyer, while England, Germany, France, and Italy, and lately Russia, buy large quantities of the crude and some of the better classes of fiber. The industry began in 1880, when the value of exports was $24,700. In 1904 the output had increased to $1,154,566.

Professor Ingalls, editor of the Engineering and Mining Journal, of New York, has been commissioned by the minister of the interior to investigate and report upon the zinc deposits of British Columbia. Experts have been at work for some time surveying areas where zinc is known to exist. Professor Ingalls will master the details of their reports, and then give attention to the economic treatment and transportation of ores, also to the possibilities of establishing a profitable industry. A number of 100-pound samples of zinc ore will be shipped to Denver, in which various processes of concentration will be tested on a commercial scale.

MANUFACTURES.

Canada can not be called a manufacturing country in the sense that England, Belgium, Germany, and some other countries are called such. Still it has done a little and is eager to do more. To secure the little that has been established and to encourage capital to go into manufactures protective tariffs and bounties have been introduced. Manufacturing is increasing, but is hardly keeping pace with the development

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of the country. American capital is a large factor in manufacturing in the Dominion; a number of the largest and most successful industrial corporations in America have already established large plants in the Dominion. The most successful iron and steel enterprises in the Dominion have received bounties amounting to more than $5,204,755 during the past seven years.

WOOD PULP.

Canada's commercial agent in Norway reports that some time ago there arrived from Canada a shipment of thirty standard logs which were ground into pulp for the purpose of finding out whether Norwegian pulp is superior, or whether the method of grinding may be accountable for its preference. The result has shown that the pulp made from the Canadian logs is of excellent quality. "This is of considerable importance for the Norwegian pulp industry," the report goes on to say, "the Canadian raw material being much cheaper than the Norwegian; and when the quality is equally good, if ground in the same way, it is feared that the Norwegian pulp industry will have a very strong competitor in the Canadian pulp." This information is interesting. It points to a large future for the pulp industry of this country. It is claimed that if improvements in Canadian methods of manufacture are adopted, Canada may some day become the principal producer in the world of pulp and paper.

BIG APPLE CROP.

Agriculture is the main line along which Canada has been marching and is destined to march for many years. Her soil is exceedingly rich and well suited to certain cereals. Her wheat fields were dealt with in the pages devoted to expansion. These give great promise. So, too, do the fruit orchards of almost every section of the country. Canadian apples approach, if they do not equal, those of the United States. Thousands of barrels are sold every year in Europe. Extensive planting of trees has gone on for years. Since the middle of August the weather has been favorable for the proper development of fruit and the yield of apples has been far beyond the expectation of the fruit grower, who feared a failure in this crop. He is gathering twice as much fruit as he expected. The apples are of fine quality, many measuring 11 inches in circumference. The Canadian commissioner at Manchester reports the arrival of 95,528 barrels of Canadian apples at Liverpool to October 7, against 127,650 barrels last year. They are bringing prices greatly in excess of last year, which is natural, owing to the comparative failure of the English crop and the decline in foreign arrivals. The Canadian apples have been examined by Mr. McNamara, the Canadian commercial agent, at the auction warehouses, and he reports them of good quality, well packed, and properly graded.

CUSTOMS DISPUTE WITH AUSTRALIA.

There is little doubt but that the determination of Australia to continue adding inland rates to the value of goods for duty purposes will result in the discontinuance of the Canadian-Halifax-Australian Line of steamships. The regulation will compel eastern Canadian manu-

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facturers, as well as those of the United States, to ship via New York. The Canada-Australian Steamship Line will thereby lose almost the whole of a business which has been slowly growing. Canada contributes $37,091, Australia $26,563, and the Fiji Islands $2,346 of the $66,000 given now to the Union Steamship Company for the present monthly service. When the contract was renewed the company compelled Canada and Australia to put up an extra $3,000 each for a renewal. The contract may be terminated at the end of a year, or on August 1, 1906, by the company. It is expected that the loss of business will compel the company to give the necessary three months' notice. It is possible the service on the Pacific will be continued, but to New Zealand instead of to Australia. The Canadian government has been approached by a steamship company for that purpose, and the prime minister of New Zealand has intimated a willingness to give the matter favorable consideration. New Zealand has an appropriation of $50,000 available for such a purpose. It is possible the Australian subsidy might be diverted for the purpose. New Zealand has no tariff disabilities similar to Australian, which is killing the line. Canada has sent a protest to the imperial government against Australia's action, which they declare to be a discrimination against the Dominion railways and the Canadian-Australia steamship lines.

RAPID DEVELOPMENT OF THE NORTHWEST TERRITORY.

Consul Ravndal, of Dawson, writes as follows regarding Canada's expansion in the northwest:

Last year a royal northwest mounted police expedition, starting from Dawson, proceeded as far as Herschel Island and hoisted the British flag over a new police (semimilitary) post there, thus extending the operation of Canadian law and authority to the Arctic Ocean. Canadian expansion is no dream, but, on the contrary, a highly significant feature of the world's work of the present time. Having some thirty-five years ago acquired from the Hudson Bay Company four-fifths of the latter's tremendous grants in the north, the Canadians have ever since, and particularly under Sir Wilfrid Laurier's leadership, devoted themselves to the development of this vast territory with a view to doubling or trebling the width of the Dominion. A mighty instrument to this end is being forged, in the shape of the Grand Trunk Pacific Railway. Two new provinces have been, during 1905, carved out of the wilderness of the north, not long ago the virgin hunting grounds of Indians and fur traders. Yukon Territory has been organized, and even the Mackenzie district feels the inspiration from Ottawa. Government agents are exploring the Saskatchewan, Athabasca, Peace, Slave, Mackenzie, and other mighty rivers of the northland for the purpose of turning them into arteries of commerce. Once more the Hudson Bay Railroad project is on the tapis.

EXTENSION OF THE MOUNTED POLICE.

The Hudson Bay Company is still in active business in the Northwest. Port Simpson remains an important post. Fort McPherson, in the Mackenzie River basin, still enjoys a large trade. But the Royal Northwest Mounted Police cover all the outlying districts from Labrador to Alaska, and the Dominion government is constantly extending

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its sway. Last year the mounted police party which took possession of Herschel Island availed themselves of the advantages offered by American outposts along the Yukon, obtaining supplies at Fort Yukon, Rampart House, and other stations on American soil. In December another Northwest Mounted Police expedition is scheduled to leave Dawson for Herschel Island, but it will travel wholly in Canadian territory and thus develop an all-Canadian route. Herschel Island is the rendezvous of American whalers from San Francisco. They seldom return in one year owing to the shortness of the whaling season, which only lasts two months. Consequently these whalers make their abode on Herschel Island and anchor their fleet of steamers in its little harbor.

DRUG SYNDICATE.

MERGER OF NUMEROUS WHOLESALE HOUSES.

Consul Culver, of London, Ontario, reports that a charter has been granted by the Dominion government under which 21 wholesale drug houses in Canada are merged. The company will be known as the National Drug and Chemical Company of Canada. It has a capital of $6,000,000. It is reported that options or offers have been received by the syndicate from every wholesale house in the Dominion. Commenting on this merger the London Advertiser says:

The full meaning of the merger will be apparent only in the course of time, for it has under contemplation some schemes that will make the people sit up and take notice. Being the largest drug company in existence, it will be able to invade the European markets with a degree of success, and at home it will have everything in the drug business in its own hands. Briefly, wholesale depots will be established in every city in Canada, price cutting will be stopped, illegitimate competition will be stopped, great factories for the manufacture of the chemicals which are now imported will be built, the best quality in everything will be assured, and there will be no advance in prices. The combine hopes to make money by saving in the expense items by larger buying and through a better distributing system. It is a move that will affect the drug business of Canada to the very foundation, and if what the promoters of the combine promise turns out to be true conditions will be much improved for everyone concerned. At the present time about 90 per cent of the chemicals used in Canada are imported, chiefly from the United States, and often risks as to quality are run. Now, the buying, when it has to be done, will be in much larger quantities than any of the American houses can afford and consequently will be cheaper. Whenever possible the National concern will manufacture its own chemicals, and it intends to have its label guarantee the finest quality in everything. A big advertising campaign to acquaint the public with the wisdom of buying the National goods will be instituted.

EFFECT ON RETAIL TRADE.

On the retail trade the combine will have an influence that has been needed for some time. Having a monopoly, it can sell to whom it pleases, and it can cut off any price-cutting houses and practically force them to go out of business. Illegitimate competition will be

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stopped. When there is enough business for only two druggists in a town no one will be permitted to start up business, and thus hurt the druggists already established. The cut-price patent medicine sales will be prevented. There will be no increase in prices generally, the object of all this being the betterment of conditions in the retail drug trade. It is intended to start an extensive line of patent medicines prepared by the best chemists of Canada, and considerable advertising will be done. Druggists will be asked to fill prescriptions from national labeled goods, a guaranty of quality. There will be no lessening of the number of travelers on the road. While trips will be rearranged none will be laid off, work being found for everyone. In case the number of employees is lessened in the larger centers they will be transferred to other depots.

PROVINCE OF ONTARIO.

VALUABLE HINTS TO MANUFACTURERS AND EXPORTERS.

Consul Culver, of London, Ontario, recently made a thorough canvass of his consular district with a view of furnishing to American exporters and dealers interested in the Canadian market practical suggestions relative to the trade there. He writes as follows:

If a little more energy were exercised by some of our exporters to this market, consisting of personal supervision and encouragement together with generous advertising, the trade returns would show a very large increase over present totals. By reason of the present boom in this country, induced by the incoming of many thousands of immigrants, led by the flattering prospects of abundant and ever-increasing harvests in the Northwest, it is incumbent upon those who desire to share in the prosperity and expansion of the Dominion to enter without delay, and also to enter with the understanding that this is a foreign market. I find that, by reason of the close proximity of this field and the facilities at hand for filling hurry-up orders and quick transportation, too many of our exporters are trying to capture the field at long range. They are treating it more as a domestic market, and are therefore relying upon the telephone and the mails too much.

VALUE OF RESIDENT AGENTS.

In talking with a personal representative of one of the most successful firms that ever entered this market, I was informed that a personal representative has always been kept on the ground superintending and encouraging the business. He informed me, further, that it was by great expense at first and through great effort that they became established, but that now their undertaking is a complete success and they are thoroughly engrafted into the commercial fabric of the country. That some have been eminently successful but proves that others may be equally so by proper management, which in every case means personal supervision and encouragement. Every manufacturer and exporter who enters this market must expect to meet and hear the rallying cry of the domestic producer, "made in Canada;" besides he will meet now more than ever the competition from other countries, which is keen. But with the natural advantages that American dealers have—that of

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speedy communication by telephone, telegraph, mail, and international railways—they may expect success if they are seriously anxious to come in; but they can not rely upon these advantages exclusively to build up a successful business.

Another advantage we enjoy is the reputation already established by successful exporters, that of offering superior articles. Nothing so retards trade as the exportation to a foreign field of inferior commodities by unscrupulous dealers. Every misrepresentation, every dishonest transaction, redounds to the detriment of all commodities from that country. Every thing stamped "American" must be up to the representations made. The pioneers, the successful firms here, have raised the standard of American goods to the highest point by strictly adhering to this principle, and the future success of our exporters depends largely upon maintaining the high reputation already established.

KNOWLEDGE NECESSARY TO SUCCESS.

Another thing, to be a successful competitor in this field the exporter must be not only familiar with the tariff laws of his own country as to rebates, the return of American goods, the classification of his goods, etc., but he should be an expert on the tariff laws of the invaded country. I note only too frequently the ignorance displayed by some of our exporters of the rules and regulations governing the administration of the tariff laws of this country, leading as it does to misunderstandings between shipper and purchaser, resulting often in the return of the shipment and the placing of the order elsewhere. I can give no better advice to prospective invaders of this market than that they first inform themselves thoroughly concerning the rules and regulations governing the importation of goods. It is an easy matter to learn the rate of duty imposed upon a certain article, but it is not so easy to learn all the rules established for safeguarding the proper administration of the law, and a thorough knowledge of these rules or a lack of it often spells the success or failure of a venture into a foreign market. Shippers are compelled to respect the laws, rules, and regulations, but they should also know their rights and insist upon them under a fair interpretation of the law and regulations. This they do not always do, but back out disgusted with what seems to them to be an insurmountable obstruction to the coveted market.

The present situation here is an inviting one, but it seems to be little realized as yet by many of our tradesmen who should profit the most, and I would suggest a personal inspection by prospective exporters and the establishment of agencies or bureaus, superintended by personal representatives of the interested firms, where their commodities can be displayed and from which can be distributed sufficient advertising matter to inform the people that they are on the ground. Especially does this latter suggestion apply to the northwest.

IMPROVEMENT IN PUBLIC ROADS.

Consul Seyfert, of Stratford, furnishes a report on road building in the Province of Ontario which should attract the attention of persons in this country interested in that subject. He writes:

The Province of Ontario has 60,000 miles of country roads maintained by township and county councils. Since the inauguration movement for better roads there is a radical improvement in the con-

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dition of the roads. The old way of road improvement by statute labor, which has existed for nearly a century, and did much during pioneer days to open highways, has been largely superseded by a more modern system of a direct-tax rate and closer supervision. Township control is universal in road construction, while at the same time county councils have undertaken the management of a system of main roads within the county. The work of the county council is devoted chiefly to legislative functions, and the actual oversight of work on the ground is left to road foremen or overseers. The county system is aided by the provincial government to the extent of one-third of the entire cost of construction. During the years of 1903–4 1,624 miles of main roads were improved, at an expenditure of half a million dollars, through provincial aid. Modern road machinery, such as grading machines, stone crushers, road rollers, gravel wagons, and scrapers, is in general use throughout the province. Natural gravel beds are numerous, and care is taken to select the best gravel in the pit, which, under the modern system, is placed on the roads after the earth is consolidated with the roller. Bridges are now all being built with steel superstructures, concrete abutments, and concrete floors.

METHODS OF DRAINAGE.

The matter of drainage is given the greatest attention. Where underdrainage is needed tile are used with frequent outlets that will lead to natural watercourses. Breakers, once so common for carrying the water from one side of the road to the other, are entirely abandoned. Concrete culverts have taken their place, and on the steep hills, where such surface drainage is necessary, the road bed with its high center crown is as smooth as on the level. In the older parts of Ontario road construction has long since passed the early temporary stage, and all improvements are made with a view of durability. Perth County, of which Stratford is the county seat, has 1,302 miles of country highways; of this 672 miles are graveled, and are as fine permanent roads as can be found in any country.

A source of much trouble and expense to keep country roads open in this latitude for several months of the winter is the enormous amount of snowfall. Snow fences, similar to those used by railroads, are employed, but wire fences are much cheaper and give better satisfaction. In the early part of the winter snow plows are used, but later in the season they can not cope with the drifts, and many of the roads become absolutely impassable. To overcome some of the difficulties on snow roads the last provincial legislature adopted a measure in passing an act, the first section of which provides that: "On and after the coming into force of this section no person shall use on any public highway except within the limits of any city any sleigh or other vehicle upon runners drawn by horses or other animals (except cutters) manufactured after the 1st day of December, 1906, unless the same is so constructed that the distance between the outer edge of such runners at the bottom is not less than 4 feet." The object of this act—to have a uniform width of sleigh runners—is to get a wider track for double teams.

ANTHRACITE COAL DUST.

Manufacturers here, and throughout the Province, will resist the imposition of a duty on "anthracite dust" such as is demanded by the Nova Scotia coal companies. Anthracite coal of every grade is

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now on the free list and constitutes the principal fuel of this part of the Dominion, but since the present method of mechanical stoking was adopted, creating an ever increasing demand for the waste product known as "coal dust," its wide-spread use in factories is affecting the bituminous coal interests of Nova Scotia; hence their demand for a duty on the product. "Should they persist in their demands," the London, Ontario, Free Press says, "it will doubtless stimulate the agitation for free soft coal, which now pays a duty of 53 cents per ton, nearly every pound of which is imported from the United States." Further commenting upon the subject, says the Free Press:

"The conditions under which the duty was put on in the first instance as a protection to the Canadian miner have entirely changed since 1878. The wheat question is no longer a factor, since there is no cheap American grain coming into competition with our own in the maritime market. Ontario no longer requires a duty on wheat as a condition of submitting to a duty on soft coal. Nor does the Nova Scotian miner undertake to supply Ontario with coal, even as an experiment. He finds the eastern market ample for all he can produce. Unfortunately for Ontario, the question is not wholly between this Province and Nova Scotia. Any readjustment of the tariff would have to comprehend the western mining interests on both sides of the border."

EFFORT TO PROMOTE GROWTH OF TOBACCO.

The following is taken from the Advertiser of this city. The article is based on the action of the government in engaging a French expert to test possibilities of growing leaf tobacco in Canada, and to instruct the growers in the best methods of cultivation, drying, and curing:

It is desirable that these experiments should precede legislation giving further protection to tobacco growers, having regard to the interests of the great cigar industry of the country. The smokers, although merely consumers, have also a right to be considered. The growers have the advantage of a tariff of 10 cents per pound on the raw leaf. The excise duty on Canadian cigars made from imported leaf is $6 per thousand, and on cigars made from domestic leaf $3 per thousand. This is a very wide margin of protection for the domestic product, but all-Canadian cigars are not finding favor with the smoking public. The returns show that the number of cigars made from Canadian leaf was 3,713,150 in 1902, 2,881,360 in 1903, and 2,200,240 in 1904, a decrease of 1,512,910 in two years. The manufacture of foreign leaf cigars increased from 142,084,171 in 1902 to 170,934,150 in 1904, or 28,849,979 in two years.

INCREASE OF DUTY.

The growers are asking an increase of 100 per cent in the customs duty and a uniform excise stamp for cigars. At present separate stamps distinguish Canadian-leaf from imported-leaf cigars. Canadian growers claim there is an unreasonable prejudice against the home product, and that if it were not identified by the excise stamp smokers would make no distinction between the domestic and imported article. The manufacturers argue that they must be governed by the popular taste, and that if they were taxed into the use of Canadian tobacco

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exclusively the demand for imported cigars would be greatly stimulated and they would lose a large share of the home market. If the tariff on raw leaf is raised, they ask a proportionate decrease in the excise duty. They say they are willing to encourage the growing of Canadian tobacco, but the growers must produce a quality satisfactory to the smokers of the country.

It is believed that superior grades can be grown in Canada, and the experiments inaugurated by the government are being carried on in a spirit of confidence, which it is to be hoped will be justified by results.

DAIRY INDUSTRY.

Consul Van Sant, of Kingston, reports an active and profitable season for the cheese and dairying industry in the Province of Ontario. He writes:

Aside from its shipping and commercial importance as a city and fortress at the terminus of the Great Lakes and the St. Lawrence River, one of Kingston's most important industries is the cheese making and dairy business of the district. A low estimate places the total production of cheese during the past season of Kingston district at 60,000 boxes or about 5,100,000 pounds, valued at $530,400; Napanee district 65,000 boxes or 5,525,000 pounds, valued at $580,125. The farmers in the two districts received over $1,110,000 for their products of the dairy. Some 27,921 boxes of cheese were registered at Kingston and the average price was 10.48 cents per pound. The quality of the making during the season was never better, Kingston factories especially showing marked improvement. With the close of this week operations will cease in most of the cheese factories of this district and on Wolf Island, nearly opposite the city. The dairy season has been successful and profitable, as cheese has maintained a high price, and hogs, which go hand in hand with dairying, have never been higher priced for years, thus adding to the prosperity of the dairy farms of this district.

The Eastern Dairy School has been established in Kingston, maintained by the Ontario department of agriculture, with a view to furthering the dairy industry of the province. Lectures on the science of dairying, bacteriology, and chemistry, with special reference to the chemistry of milk and its products, and practical work in cheese are the principal courses of lectures. Students are given thorough training in the judging and selection of milk for cheese and butter making, and are taught the preparation, selection, and proper use of cultures. Much of the success in building up the dairy and cheese-making business of this vicinity to its present value and importance to Canada is due to the practical and efficient schooling of the students and the dairy farmers of the district.

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MARKET FOR POTATOES.

The potato crop of Kingston and vicinity this season was fully half rotten. Where planted on high sandy loam and clay soil, potatoes were scarcely worth digging. Many farmers in this section are buying potatoes for family use. Near Kingston the land is mostly heavy clay and there are very few potatoes here. The prices are from 90 cents to $1 a bag. It is doubtful if the outlying districts of Frontenac, Lennox, and Addington have enough to supply the local markets. There should be a good market for potatoes sent to Kingston for the winter months, and profitable prices should be realized. This year potatoes were injured by the large white grub; some of them were nearly eaten up. Blight injured them even more, so that the crop is more than half a failure.

MARRIAGE LICENSES ABRIDGED.

Consul Conant, of Windsor, reports that the secretary's department of the Province of Ontario is endeavoring to prevent the issuing of marriage licenses at frontier points in that province to persons from the American side, which is a flourishing business, particularly at Windsor. The attorney-general has recently handed down an opinion that such licenses should not be issued. In effect the ruling of the attorney-general is that the licenses should not be issued to people who are not bona fide residents of the province, and the provincial secretary's department will try to enforce that ruling. License issuers and ministers on the frontier will naturally suffer financially, and those at Windsor to a greater extent than others.

A NEW PROVINCE.

Consul Ernest A. Wakefield, of Orillia, writes that the name "New Ontario" has been applied to the northern section of the province of

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that name. This section of Ontario was until quite recently comparatively unknown. It comprises that portion of Ontario lying west of the upper Ottawa River and its tributary lakes and north of Lakes Huron and Superior, with Quebec the eastern and Manitoba the western boundary. A line drawn east and west through Mattawa, North Bay, and Sudbury might be considered the southern and the Albany River the northern boundary. Its area is about 140,000 square miles, and the crown lands are more than 100,000,000 acres. New Ontario is dotted with lakes, contains numerous rivers, and is well timbered with white pine, banksian pine, spruce, cedar, and hard woods. Varied and valuable mineral deposits exist in various parts of this section, but lack of transportation facilities has prevented exploitation and operation. Thousands of acres of good farming land are awaiting development.

PROVINCE OF QUEBEC.

LICENSE LAW AFFECTS SALE OF AMERICAN GOODS.

Consul Lang, of Sherbrooke, Province of Quebec, reports that the license law seriously interferes with the sale in that province of American products. He writes:

The sale of American goods has been interfered with by the license law. The whosesale dealers go to the United States and buy their goods as formerly, but many retail merchants, who can not afford a trip to New York or Boston to make their purchases, and who have been in the habit of buying from commercial travelers representing American firms, are now unable to obtain American merchandise unless they purchase it of the Canadian wholesale concerns. Among this class of merchants the sale of our goods is curtailed, and in many instances absolutely prevented. The license law is exceedingly obnoxious to all the business men in this province, and its repeal has been continually advocated by the press, on the ground that it interferes with business not only with the United States, but between the different provinces as well. It is confidently believed that the next session of parliament at Quebec will either repeal this law or reduce the amount of the license fee. In case the law is not repealed American dealers who desire to sell goods in this market will be obliged to make new and different arrangements.

INTRODUCTION OF NEW GOODS.

Among the new American goods that have been introduced during the last year are several makes of American pianos. These have been sold by a resident American agent, have given good satisfaction, and are now in active competition with those of Canadian manufacture and at about the same price. The sales of American farming machinery and implements have been equal to those of last year. The license law has not injured the sale of this class of goods, because all the American manufacturers have resident agents, and have not been obliged to take out licenses.

No fault has been found with the method of packing, and it has been generally satisfactory. The superiority of many kinds of American goods is well known and recognized by both the merchants and their customers, and the demand for them shows a steady gain. With

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the repeal of the troublesome license law there should be an increase in all lines of American trade in the markets of this province.

CANADA'S MERCHANT MARINE.

Commercial Agent Carroll, of Grenville, writes that the latest report issued by the marine department shows that on December 31, 1904, the number of sailing vessels, steamers, and barges on the register books of the Dominion was 7,152, measuring 682,838 tons, register tonnage, an increase of 132 vessels and a decrease of 309 tons as compared with 1903. The value of the shipping of the Dominion at the close of 1904 is estimated at $20,485,140. During the year 308 new vessels, totaling, 18,554 register tonnage, were built, the value of which is placed at $834,930. The total number of steamers in the Dominion is 2,543, of 353,514 tons gross.

BUTTER AND CHEESE.

Commercial Agent Alfred J. Fleming, Stanbridge, furnishes a statistical report showing the quantity of butter and cheese sold in his consular district during the season, which extends from April 1 to November 25. The figures were kindly furnished the consul by Hon. W. H. Lynch, secretary of the butter and cheese board of Sweetsburg, in the province of Quebec. It appears from these figures that the amount of butter consumed during the season to November 20, was 40,097 boxes; that the prices ranged from 18¼ to 22¼ cents per pound, and that the aggregate of the sales was $481,023. In the same period the amount of cheese sold was 22,017 boxes, the price ranging from 9½ to 12 cents per pound.

VANCOUVER.

LOGS TO BE FLOATED FROM FRASER RIVER TO SAN DIEGO.

Consul Dudley, of Vancouver, reports that Capt. C. H. Robertson, of Portland, Oreg., proposes to purchase fir logs which the sawmills of British Columbia will not use, build them into enormous rafts, and tow them to San Diego, to be there cut into firewood and sold. The consul writes:

The provincial law requires all logs cut upon provincial lands to be manufactured within the Province. Captain Robertson hopes some way may be found to modify the law so as to allow the export of the inferior quality, which is as good as any for his purpose. If allowed to raft the logs Captain Robertson said he would make considerable purchases of lumber from the local mills, placing the same upon the top of his rafts for transportation. The captain expressed the belief that he could tow mammoth rafts to San Diego at a cost not exceeding $2 per 1,000 feet, while cord wood can be sold there for $12 per cord. The rafts, which Captain Robertson has demonstrated can be safely towed on this coast, frequently attain a draft of 25 feet. They are built from the ground up, as it were, and are put together with as much care as the ribs and planking of a ship. Great chain cables hold the gigantic rafts together, and everything is made fast before they

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put to sea in tow of powerful tugs. Captain Robertson states that he would use a site on the Fraser River near its mouth for the making up of his rafts. The reason for building them on the Fraser River is that in fresh water the logs would not be eaten into by the teredo. The local lumbermen are likely to assist in this effort to induce the government to amend the law in favor of the enterprise.

CONTENTION WITH LOGGERS.

While the provincial government has been contending with the loggers to prevent the export of logs from British Columbia to the Puget Sound cities, a condition has supervened which results in the bringing of logs from Puget Sound to this province. One large dealer who has been exporting for several years has now purchased 5,000,000 feet of logs from Puget Sound, which are to be towed over to a mill on this side of the line. It is probable that this condition is only temporary, resulting from a lack of labor in the logging camps on this side.

YUKON.

INDICATIONS OF INCREASED GOLD OUTPUT.

Consul Ravndal, of Dawson, Yukon, furnishes a report in which figures are given of the gold output of the last season and furnishes estimates of the probable production in the immediate future. He writes:

Juneau, Nome, and Fairbanks are at present the chief centers of Alaska's gold mining industry, which has finally passed in value its fisheries, hitherto the principal natural resource of the district. There are other mining camps and mining districts, such as Fortymile, Circle, Rampart, Koyukuk, etc., but the output of the latter diggings has not as yet appeared in the six-figure class, although in some instances running annually into hundreds of thousands of dollars. I have taken some pains to secure a correct estimate of last year's gold harvest in Alaska. I refer to the season beginning October 15, 1904, and ending October 15, 1905.

As to southeastern Alaska, comprising the "panhandle" and the Alexander Archipelago, I believe it is safe to place the value of the output at $2,500,000. Most of the gold produced in that region comes from the famous Treadwell quartz plants on Douglas Island. In 1902 J. H. Curle, of London, a mining engineer of recognized standing, after a personal inspection, stated that these mines were at that time treating over 3,000 tons of ore a day, the value of the ore being 8 shillings a ton. This calculation would produce a total for 1902 of something like $2,128,680. It is, however, known that the yield of the Treadwell mines has been steadily increasing. Besides, there are other producing mines in that part of Alaska. My estimate of $2,500,000 may be too low.

As regards Seward Peninsula, I put the past season's gold crop at $4,500,000. According to reliable private advices the amount would have been at least $1,500,000 higher but for early frosts, which cut the season short, and unsatisfactory weather conditions generally, such as insufficent rainfall during 1905. Sixty miles of water ditches

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have been constructed during the past season, dredges and hydraulic machinery introduced, and it is confidently predicted that next year's statistics will show a notable expansion of the gold mining industry in the Nome region.

In the Tanana Valley during the season of 1904–5 they washed out gold to the amount of $6,750,000, a tremendous increase over previous returns. It should be remembered that the Tanana Valley camps are hardly more than 3 years of age. Conservative residents of Fairbanks, including bank officials, believe that the 1905–6 season will prove a still greater surprise, as much new and rich country is being opened up, especially in the Kantishna district, which borders upon Mount McKinley. A vigorous new town is growing up in the latter district under the name of Roosevelt. Perhaps a majority of the Tanana Valley prospectors are former Klondikers.

OUTPUT FOR THE SEASON.

Counting the gold output of smaller camps, especially in the Yukon basin, I find that the total output of gold in Alaska for the season just ended exceeded in value the sum of $14,000,000, as compared with $9,067,325 for 1903–4, and as against $6,352,028 for 1902–3. As late as 1891 Alaska's total yield in precious metals amounted to only $772,197. According to the Tenth Census, taken in 1880, the number of white inhabitants of Alaska was, at that time, 430. It is now, twenty-five years later, 35,000. Beyond doubt the Alaska-Yukon Exposition in Seattle in 1907 will mark the beginning of a new era in affairs Alaskan. It is during the last five years, or since the Klondike discoveries, that Alaska has come to the front. Alaska has passed Montana, Nevada, and South Dakota in the matter of gold production, and is now proceeding to give California and Colorado a hard chase.

MEXICO.

SURVEY OF THE MARKETS.

GOOD FIELD FOR AMERICAN PRODUCTS—HEAVY WAGONS AND FARMING MACHINERY NEEDED—POPULARITY OF AMERICAN SHOES.

Special Agent Pepper, writing from Chihuahua, directs attention to conditions in that and the adjoining States of Coahuila and Durango, in which there is an inviting field for the extension of American trade. The Sierra Madre regions will shortly be developed through railway extensions, which means that a demand will be created for mining machinery and industrial supplies of almost every character. American shoes are held in high esteem and are largely sold by reason of their superiority. What Mr. Pepper says in regard to the push of German commercial agents in contrast with the periodical visits by American agents, and the lack of proper enterprise by American manufacturers, should receive thoughtful consideration. His letter follows:

There is a growing field for the products of the United States, as my investigations shows, in all this section, including the States of

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Coahuila and Durango. The matter to which the attention of manufacturers in the United States should be especially directed is the coming development of the Sierra Madre regions, by means of the railway extensions toward the Pacific, which now seems assured. This will open up not only new mining resources, but more particularly timber lands and general agriculture. It would be worth while for the makers of sawmills and similar machinery to make a special study, through competent representatives, of the prospects of this trade. They can only do it on the ground, but large purchases of timber tracts by Americans indicate that it will not be long until there will be a marked demand for machinery of this kind. It would also be worth while for the manufacturers of heavy wagons to visit this section of Mexico and study the possibility of manufacturing a vehicle which would be able to supersede the primitive carts of the natives now used in the mountain regions where good wagon roads have not yet been opened. The trade in ordinary farm wagons is so well supplied by the Studebaker and other concerns, which have cultivated it for years, that there are no new fields to be opened up in this line. But the manufacturer who can devise a heavier cart seems likely to obtain a profitable market.

GOODS MOST IN DEMAND.

With regard to the classes of goods which are most in demand, and which can be supplied advantageously by the United States, it may be said that they are so numerous as to include substantially everything that is in demand north of the Rio Grande. The sales of shelf hardware are increasing very rapidly, while there is a good demand for oil and wood stoves and cooking ranges. I find a very prevalent opinion that the sales of oil stoves could be increased if the price of petroleum were lower. In fine dry goods the French control the retail trade, but in shoes and in footwear of every kind the American manufacturers have practically a clear field. The demand has grown very rapidly during the last three years. The old style sharp-pointed shoe of Spanish origin has almost disappeared and has been replaced by the American lasts. Some of the native manufacturers have sought to imitate the patterns from the United States, but it is in the form only. They have not been able to supply the same quality or anything like as good a shoe. Clerks and other employees in the big warehouses and stores, who are on their feet from ten to fourteen hours daily, have taken to buying the American shoe because it is so much more comfortable than the native or the imported European product. It is not too much to expect that in time the peons, or laboring classes, who now wear a course sandal, will take to a strong and durable shoe, and there is no reason why manufacturers in the United States should not also supply this demand. The two leading points are comfort and durability. Since the introduction of American shoes the retail prices have been lowered materially through the competition of new firms seeking this trade. In order to maintain and enlarge the market that has been obtained it is necessary above all things to preserve the quality of the shoes manufactured in the United States. In the face of increased tariff duties the American manufacturer who is looking to permanent trade in Mexico will do well to shade his profits rather than to lower the standard of his goods.

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FARMING MACHINERY AND LUMBER.

In the general sense the trade which promises the greatest growth in this section is that resulting from agricultural development. Governor Creel, the progressive executive of the State of Chihuahua, has initiated various measures for irrigation and experimental agriculture. These are likely to insure a considerable accession of farmers, who will want not only agricultural machinery but lumber and the means of supplying the ordinary necessities. The immigration will be chiefly from the United States. The success of the Mormon colonies in the northern part of this State is likely to encourage further colonization.

I am convinced that there is a very much wider market for the products of the United States throughout this section of Mexico, but it can only be obtained by systematic and intelligent effort and by an understanding of the methods of competitors. The Germans have a very large trade which properly belongs to the United States. They cultivate it in every manner, and in Chihuahua a German school is said to receive a regular annual subvention from the Imperial Government as one means of maintaining German influence.

REMISSNESS OF AMERICAN MERCHANTS.

Freight rates from Hamburg via Tampico are about the same as from New York or St. Louis, and are a little lower than from Chicago. The Germans are therefore on an even plane in this respect. But the markets that they have secured are not due to this cause. They are persistent, systematic, and thorough. At the hotel where I am stopping is a German commercial traveler who has with him 28 sample trunks. He has settled down to study the trade requirements of this section. The drummer from the United States, on the other hand, is not under the necessity of carrying such a large line of samples, because he need not represent so many different lines of goods. He can afford more time to follow up his own specialty. Yet he comes to the city, visits only three or four leading houses, announces that he can only stay one or two days, because he has other towns to make before the end of the week, and then departs after having taken a few orders. This method will not secure trade that could be had by a more deliberate solicitation and more thorough study of the local demand.

The truth is that much of the trade which has come to the United States has been without enterprise on the part of the manufacturers and shippers. The growth of American communities has created a demand for American goods. Hence it is that American grocery, shoe, and hardware stores and the like have sprung up. This has helped to make the American articles known to Mexican consumers, and has enlarged the demand. With this natural basis there is every reason why manufacturers in the United States should seek more systematically to supply Mexican consumers. There is also an advantage to be gained from advertising. I am informed that mail-order houses are building up a profitable business by this method.

EXTENSION OF CREDIT.

As a further means of increasing commerce the time seems to have arrived when houses in the United States can afford to extend their

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credits, and if not willing to go the full length and allow the nine months which their German competitors concede, at least to give from ninety days to six months. These accounts draw 6 per cent interest. Mexican bank failures are relatively as few as in the United States, and mercantile failures are more rare. The Mexican law as applied in the Commercial Code is rigorous in its protection of the creditor. Commercial ratings are now supplied by R. G. Dunn & Co., and the standing of a Mexican customer is as easily ascertained as that of one in the United States. As a final suggestion to manufacturers or firms in any line of goods which desire to increase their Mexican trade, I recommend that they send a specially-equipped representative, who speaks Spanish, to the city of Torreon. That is a railway point and the natural distributing center for a population, industrial, mining, and agricultural, which is increasing very rapidly. With headquarters established there for two or three months any competent trade representative would be able to note the commerce that is to be obtained.

SONORA.

SALE OF AMERICAN GOODS GROWING—INDIAN TROUBLES.

In the following letter from Guaymas, Special Agent Pepper explains the commercial and industrial conditions in the State of Sonora, and gives results of his observations regarding markets for products of the United States in that section of Mexico. The information furnished should be especially interesting to business men in the West and Southwest. His letter follows:

The trade of the State of Sonora is partly supplied by maritime transportation and partly by railroad lines. The chief seaport is Guaymas, and through this port the bulk of the imports of merchandise from Europe is received. The imports from the United States are transported over the southwestern and the Pacific coast railroads, and are entered at Nogales and other points along the international boundary. Though some groceries and other merchandise are received from San Francisco by water, the total is not large in comparison with the importations from Germany.

Tramp sailing vessels arrive regularly with full cargoes, on which very low freight rates are given. The wholesale firms are chiefly German and Spanish, while the Chinese have a large share of the retail trade. The tendency of the importing houses is to buy in the European market, but there is no prejudice against American goods, and where the same terms as to credits and discounts are offered the shippers in the United States have an open field for competition.

ILLUSTRATION OF EFFICIENT EFFORTS.

Much of the buying is through commission houses or brokers, who place the orders and arrange for the shipment of the goods in bond when they are transported by rail across the international boundary. Some muslins and calicoes of finer grades are bought in New York, the Sonora cotton mills not yet having been able to meet all the requirements of the local trade. Shelf hardware, with the exception of axes, is imported largely from Germany, though, with reasonable

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freight rates from the railroad companies, the Chicago and St. Louis houses should be able to supply this demand, as they are doing in other sections of the State lying closer to the United States.

Mining machinery is provided almost exclusively by the United States, but coal for the smelters in this locality is brought from Australia. Light wagons and also heavier ones for freighting to the mines are supplied from South Bend and other points in the Northwest. This trade, which has a permanent and increasing value, has been secured by persistent and intelligently directed "drumming" by American manufacturers. It is an illustration of what can be accomplished in other lines if the same systematic energy is shown.

COMMERCIAL IMPORTANCE OF GUAYMAS.

I desire to call special attention to the importance of Guaymas, not only on account of the present commerce, but more especially because of the enlargement of markets in the future. This is on account of the railway construction that is now in progress. The Southern Pacific system, under a concession from the Federal Government, is to be extended along the coast to Culiacan and Mazatlan and thence to Guadalajara with ultimate possibilities of an independent line from Guadalajara to Mexico City. Orders for 40,000 tons of steel rails were placed in Europe, as I am informed, because of the inability of the American mills to supply them in the time required, but the rolling stock probably will be obtained in the United States.

The section of the railroad now under construction is from Guaymas to the Yaqui River Valley. Its importance in developing a phenomenally rich agricultural district is recognized, but there is additional interest for American manufacturers in the various colonization projects which have for their object the inducement of settlers from the United States. Many American families are already settled in Guaymas and vicinity, so many that one firm lately issued a circular in English soliciting their custom. In the course of the natural development of the outlying region Guaymas should become much more of a trade center for the distribution of products from the United States than it is to-day.

The mining industry is certain to receive a stimulus equal to that given tropical agriculture and perhaps greater. In view of these facts, I suggest that American firms seeking to enlarge their export trade send trained men to investigate the probable extent of the market for the next five years, and especially the relation of ocean freight rates from Germany to the railway rates from points in the United States.

INVITING TRADE CENTERS.

With reference to other distributing centers than Guaymas it may be said that Hermosillo, the capital, has a very large trade, chiefly in supplying the mines, and here the United States makes a better showing. The largest hardware firm reports that it is regularly filling its shelves with goods from the United States, which displace those from Europe. In miscellaneous merchandise there is also a tendency to increase the American purchases, though the cotton and woolen mill at Angelus, 30 miles distant, fairly meets the local demand for those staples in the common grades. Consul Hostetter calls attention to the opportunity for establishing a shoe factory.

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Along the international boundary the heaviest importations are made at La Cananea, where a large amount of American capital has found profitable employment in developing the copper mines. A prosperous community, which is more American than Mexican, has grown up, and the purchases north of the boundary line have become heavy, with the certainty that they will increase. The management of the Cananea Consolidated Copper Company informed me that its importations of mining machinery, coal, lumber, etc., in some recent months had been from $130,000 to $140,000. The average may be placed at $100,000 monthly. In addition, the imports of general merchandise by this company average $40,000 per month.

Approximately 70 per cent of the food stuffs, clothing, etc., for the mining community has to be imported from the United States, since the northern zone of Mexico is limited in its productiveness by natural conditions. The very liberal tariff concessions made by the Mexican Government on mining machinery and similar importations do not seem to obtain on articles which are consumed by those employed in the mines and by all other classes. Recent tariff changes have raised the duties. In consequence the cost of living on the Mexican side of the boundary is considerably higher than across the line in the Arizona mining towns. Much of the goods have to be procured from the United States under any conditions, and the Mexican consumers are the chief sufferers, yet an arrangement which lowered the duties imposed by Mexico on food stuffs and clothing—but particularly on food stuffs—would be mutually advantageous and would be certain to result in an increased trade.

TROUBLE WITH INDIANS.

Since the subject bears so directly on the present commercial conditions in Sonora, as well as on the prospects, it is proper to refer to the Yaqui Indian troubles. Their recurrence undoubtedly has been a grave embarrassment to the authorities and a serious interference with trade and industry. It could not be otherwise in a section in which the mining industry occupies the important place that it does in Sonora. Instances of an almost complete loss of interior trade by large firms in Guaymas, Hermosillo, and elsewhere are easily confirmed. The loss is a serious one, but the hopeful feature is that everyone looks on it as only temporary.

While in some respects similar to the Apache troubles which the United States experienced, the Yaqui situation has one element that makes it more difficult for the Mexican authorities. This is the excellence of the Yaqui as laborers and the number of them who are employed in the mines and in the smelters, yet who are believed to contribute, either through fear or through secret sympathy, to the raiders in the field. The rigorous policy of deportation for the Yaqui in the field which is now followed by the Mexican Government seems likely ultimately to end the trouble, though it will also take many so-called peaceful Yaqui out of the industrial life of the country, for they will remove voluntarily.

In the meantime the policy for Americans in Sonora to follow seems clear. They should freely avail themselves of the protection offered by the military authorities, and should not hesitate to ask it. At present there are too many Americans complaining of the unsettled conditions, when they could have a guard or a military escort and

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protection for their camps by making their wishes known. Cooperation with the authorities will reduce the disturbed area and will insure the revival of many enterprises that have been temporarily abandoned.

AMERICAN CAPITAL INVESTED.

From the best information obtainable the American capital invested in Sonora now amounts to $40,000,000. About 70 per cent of this is in the mining industry, and recently much of the new investment has gone into smelters. The balance of the capital is in railroads and cattle and land companies, the amount invested in commercial enterprises being small. On account of the railroad construction and other causes already described, this State is a promising one for the extension of American trade and for further American investments if made conservatively and after thorough investigation. It is therefore entirely safe to disregard temporary unfavorable conditions and to look to permanent markets.

LOWER CALIFORNIA.

ADVANCE IN INDUSTRIAL CONDITIONS.

Vice-Consul Viosca, of La Paz, writes that business conditions in that section of Mexico have advanced; that opportunities are presented for the purchase of land which produces tan bark in large quantities, and that advantages are offered for establishing tanneries and a shoe factory. The consul writes:

The commercial conditions prevailing in this district at present are identical with those of the last few years, and nothing of any note can be said as to their advancement.

In the industrial line a slight advance has taken place. A few mines have been developed into good, sound properties, and these are gradually attracting more prospectors and capitalists to this district. One of these mines, recently opened up at a very moderate expense, was solicited by a purchaser, and the sum offered of $250,000 gold was promptly refused. Other mining claims are being explored with very fair prospects in view. A great number of unclaimed ledges exist throughout the district that some years ago could not be worked profitably and that with present methods of extraction no doubt could now be worked successfully. These would seem particularly inviting to competent miners.

Lands are becoming more and more expensive; and while the greater area is not under cultivation, they seem to be increasing in demand. Two or three years ago a hectare of land (2½ acres) was obtainable at from $1 to $1.50 Mexican, and at present some tracts can not be obtained at less than $10. The large amount of superior tan bark produced thereon more than suffices to pay for the lands. This tan bark runs from 30° to 31° in strength, is of superior quality, and is quite abundant. A large modern tannery has been recently established here and is producing with this bark a fine grade of leather equal to the best American oak-tanned leather. This industry could be extensively increased, and the climatic conditions, cheap labor, and pure water seem to favor this class of enterprise most admirably.

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Now that the duty on shoes has been advanced from $1.25 to $1.75 a pair, it would seem that an opening for the establishment of an American shoe factory in this district would offer quite an inviting opportunity for a profitable investment.

The pearl fishers on this coast have at last taken in hand the cultivation of the pearl oyster, and it is proving a great success. The methods are still very crude, and no care is being taken to make a study of the nature and customs of this bivalve, which should merit a scientific investigation of the fish commission as to whether it would be susceptible of being transplanted and cultivated in other waters. The quota of pearls yielded by the cultivated oyster is equal to that of the ordinary one, and the reproduction of the oyster in still waters is something phenomenal in numbers.

It is reported that the Mexican Government is about to establish a wireless telegraph system from this port to Topolobampo Bay, situated almost opposite La Paz across the Gulf of California, and also a wire from this place to Cape St. Lucas. When this is accomplished the development of the resources of this Territory will be largely advanced.

CALIENTES.

SUGGESTIONS TO PROSPECTIVE INVESTORS.

Commercial Agent Wardman, of Aguascalientes, has received numerous inquiries from parties in the United States in regard to making investments in that district in small farms and truck gardens, in response to which he makes the following report:

There is a good field for investment in small farms in this district. The large farms are owned and operated by people of means who have no desire or necessity to sell, and who consequently hold the land at such prices as to make investment doubtful. But among the gardens there are sometimes favorable openings for actual purchase and often for long-time leases. For truck gardening climatic conditions are ideal. Fruit and vegetables can be cultivated the year round, and alfalfa can be cut from seven to eight times during the year. The mistake should not be made, however, of concluding that with such apparent favorable conditions success is to be achieved easily. The location of the desired land itself may be attended with many difficulties, especially if the interested party is not acquainted with local conditions.

The local water supply should be carefully looked into, as the rainfall very seldom exceeds 18 inches per year, almost all of which is precipitated from June to November. Plans are under consideration for the construction of a large reservoir about 30 miles north of this city which, if successfully accomplished, will make available many small gardens that are now entirely dependent upon the rainy season. It is well to consider also that at the beginning any of the land will have to be renewed. The most serious of all the troubles to be expected will be with the labor. In the case of one foreigner, who has a dairy and truck farm, innumerable difficulties with the labor question were constantly met, and finally, in an effort to solve the problem, he has entered into partnership with a Chinaman, the only obligation of the new partner being to supply sufficient labor.

From many of the letters received it is inferred that the writers may not have much money to invest in the business. In the absence of

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sufficient means to guard against first failures or disappointment, the only recommendation that can be offered is, "don't come."

NUEVO LEON.

REASONS FOR FAILURE OF MANY AMERICANS.

Consul-General Hanna, of Monterey, in response to inquiries from a large manufacturing establishment in the West regarding the failure of Americans to do more business in Mexico than is now being done, wrote the following letter, which will be of general interest to our business men:

Your lack of business in Mexico is doubtless attributable, to a great extent, to the fact that you require the trade to send cash with order and your lack of relation with the merchants of this country. There is no doubt that Mexico should be a heavy consumer of your goods, but the merchants here find the conditions which many American manufacturing firms and companies impose, namely, requiring that cash shall accompany orders, objectionable. They take the ground that they run the same risk in sending cash to concerns which they do not know that the manufacturing concern does in sending the goods into a foreign country.

Much business is done in Mexico by the European houses, but not only do not require cash with order but allow even as high as six months' time if it is desirable. There are a great many very large merchants in Mexico who are just as careful of their credit and prompt payment of their obligations as anywhere in the world, and these people naturally object to the manifest lack of confidence when they are required to send cash with order before goods are shipped. R. G. Dun & Co. have had a department in Mexico for several years, and you can readily secure the rating of any prominent commercial house here by consulting them. Of course, if your line of goods has not been introduced into the country it will probably be wise to send a traveling man to canvass the situation, who could readily ascertain the houses who are thoroughly responsible and to whom shipments should be made the same as in the United States.

MUSICAL INSTRUMENTS.

Replying to another inquiry, Consul-General Hanna, reports that there are two large music stores in that city dealing extensively in pianos and musical instruments of all sorts, and that several of the furniture stores handle pianos and other musical instruments. The consul-general adds:

"There appears to be a growing demand in Mexico for pianos and musical instruments. Many of those of American manufacture are popular with the Mexican people, and without doubt our American manufacturers of pianos and musical instruments of superior quality have a very fair opportunity for increasing their business in Mexico. The Mexicans are a musical people, and, as a rule, the so-called cheap instruments are not greatly in demand. It is a common thing in this country to find a high-grade piano and several high-class musical instruments in a Mexican home where there are no carpets on the floor and where the furniture of the house is of the most ordinary kind."

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SOUTH AMERICA.

ARGENTINA.

IMPORT TRADE OF LAST YEAR.

ANALYSIS OF THE FIGURES—OBSTACLES TO AMERICAN PROGRESS—HALF-WAY MEASURES WILL NOT SUCCEED.

Under date of October 17 Special Agent Hutchinson writes from Buenos Aires a letter which is supplementary to his letter of August 29, published in Consular and Trade Reports. Mr. Hutchinson analyzes the official figures for 1904, giving the imports into Argentina for that year and shows the share of the United States. Special attention is directed to what Mr. Hutchinson says about textiles. It appears that textiles of American manufacture have as a whole fallen off, notwithstanding the fact that American prints are recognized as far better and cheaper than any others. This is attributable to the indifference of our manufacturers to the importance and value of the market, the requirements of which should be closely studied and persistently followed. Mr. Hutchinson believes that the presence of technical experts from the United States to study fashions and grades of goods would enable our manufacturers to establish a firm foothold. In concluding he furnishes an example of how success has been achieved by our foreign competitors.

When I forwarded my report No. X, on August 29 last, the Argentine official statistics of the import trade for 1904 had not yet been published, except so far as they related to the total imports of various classes of goods. It was possible, therefore, to make comparisons as to the success of the competing countries in this market only to the end of the year 1903. The detailed figures for 1904 have now appeared, and they give so striking a proof of the continuation of the developments alluded to in the earlier report as to demand a return to the subject.

The imports of Argentina by classes of commodities are shown in the annexed table. The first column gives annual average values for the five-year period. The values are stated in thousands of pesos gold, the value of the peso being 96.5 cents.

Articles.	Average, 5 years, 1900–1904.	1904	Percentage of total.	
			1900–1904.	1904.
Textile goods	38,707	56,819	30.00	30.38
Iron and steel, and manufactures of	25,500	42,173	19.77	22.52
Wood, and manufactures of	8,985	14,892	6.96	7.95
Foodstuffs	11,559	13,796	8.96	7.37
Stoneware, earthenware, crystal and ceramic products	11,563	16,995	8.96	8.54
Beverages	6,671	7,791	5.17	4.16
Oils: Fixed, mineral, volatile, and medicinal	4,616	6,206	3.58	3.31
Sundry articles and manufactures n. o. s	3,887	6,179	3.01	3.30
Chemicals, drugs, etc	4,573	6,014	3.54	3.21
Metals, other than iron, and manufactures of	3,729	5,304	2.89	2.83
Tobacco, and manufactures of	3,541	4,578	2.74	2.44
Paper, and manufactures of	3,106	4,024	2.41	2.15
Leather, and manufactures of	1,143	1,411	.89	.75
Paints, varnishes, etc	906	1,184	.70	.62
Live animals	538	968	.42	.52
Total	129,024	187,304	100.00	100.00

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WHAT THE FIGURES SHOW.

These figures illustrate the rapid increase of imports which is taking place, for there is not one of the fifteen classes of goods into which the Argentine schedule is divided which does not show a rise in foreign purchases in 1904. But the rate of increase is by no means uniform for all the groups—there is a redistribution going on in their relative importance in the list. Textile goods have about maintained their position, constituting 30 per cent of the total. Iron and steel, wood, live animals, and sundry manufactures unenumerated show an increase in percentage of the total trade, while all the others occupy a less important place in 1904 than they did for the five years as a whole. The most remarkable advance has been made by iron and steel and manufactures thereof. For the whole five years they constituted 19.77 per cent of the total imports, but for the single year 1904 this had risen to 22.52 per cent. The partial figures published for the year 1905 show a still further strengthening of the position of these goods, and for the first six months of this year they have actually surpassed textiles as an article of import. For these six months textiles made up only 24.56 per cent of the total foreign purchases, while iron and steel had risen to 29.82 per cent. The growing importance of iron and steel in this market is a factor of much significance for American trade, for, as pointed out in my previous report, it is in just this line of goods that the United States is proving herself best able to compete with the countries of Europe.

IMPORTS OF COTTON FABRICS.

In my report already alluded to, in speaking of textile goods as a whole, I said that "we can hardly be said to compete at all as yet" in these commodities. This is true as a general statement of existing conditions, yet there are certain special lines of goods in which the United States has begun to make sufficient showing to indicate that the near future may bring important developments. It is worth while, therefore, to examine the figures more in detail. In the following table the principal items only are given in round numbers:

Articles.	Average, 5 years, 1900–1904.	1904.	Percentage from United States, 1904.
Yarn	1,163,000	1,666,000	2.3
Bags	449,000	595,000	17.8
Lace and tulle	597,000	1,021,000	.....
Sewing thread	527,000	624,000	1.1
Hosiery	742,000	1,078,000	.....
Handkerchiefs	547,000	661,000	.3
White goods	.....	4,093,000	.9
Prints, etc	.....	14,912,000	.2
Unbleached goods	1,250,000	1,589,000	1.0

Values in gold pesos: 1 peso=96.5 cents.

In hosiery and in lace and tulle the United States has as yet done nothing here. In yarn and in piece goods, as a whole, our trade has fallen off in the last few years; but in bags, sewing thread, handkerchiefs, and prints our trade, though small, is increasing. The most remarkable advance has been in bags. Five years ago our exports were nil, but in 1904 we supplied nearly 18 per cent of the imports, the remaining 82 per cent being purchased from England. The best

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outlook, however, is in prints, the largest item in Argentina's cotton imports. I am told by the largest importers of these goods that American prints are better and cheaper than any others, the only obstacle to their introduction being the fact that we do not manufacture with especial regard to the peculiar needs of this market. If our manufacturers would send their technical experts here to study fashions and grades of goods, they could easily gain a secure foothold in the market.

IMPORTS OF MANUFACTURES OF WOOL.

The following table shows the values of the principal items of manufactures of wool imported:

Articles.	Average, 5 years, 1900–1904.	1904.	Percentage from United States, 1904.
Yarn	296,000	479,000	.....
Ready-made clothing	212,000	263,000	0.8
Hats, felt	152,000	158,000	10.1
Cloth, all wool	3,236,000	4,298,000	.....
Cloth, mixed	2,080,000	3,745,000	.04
Shag	319,000	300,000	.1

Values in gold pesos: 1 peso = 96.5 cents.

Only in felt hats does the United States make any showing. Our exports began in 1896 with a small shipment valued at 90 pesos. Since then the trade has advanced steadily and rapidly till we now have one-tenth of the market. American all-wool cloth is also appearing and is well liked.

Argentina's imports of silk manufactures are small compared with her purchases of other textiles, the total for 1904 being only 2,415,000 pesos. The entire quantity comes from England and Europe except a few hundred dollars' worth of silk thread for sewing and embroidering purchased from the United States.

MISCELLANEOUS TEXTILES.

There is a very rapid development going on in the imports of "Other textiles and fibers and manufactures thereof." The average purchases for the five years, 1900–1904, were $9,537,000 per annum; for 1904, the figures rose to $16,173,000. In some of the goods included in this general class, the United States is doing a good business, as the following figures indicate, the value being stated roundly in gold pesos:

Articles.	Average, 5 years, 1900–1904.	1904.	Percentage from United States, 1904.
Burlaps, sacks	742,000	1,034,000	0.2
Fancy goods	349,000	375,000	2.1
Burlaps, in piece	4,573,000	8,654,000	.3
Twine for harvesters	971,000	1,808,000	96.8
Sail and sack thread	147,000	243,000	2.5
Other thread	163,000	240,000	4.6
Rigging and cordage	286,000	399,000	27.3
Canvas and duck for sails, awnings, etc	415,000	748,000	15.6
Small twine	42,000	76,000	75.0
Linen cloth	529,000	716,000	.....
Linen and cotton goods, mixed	157,000	178,000	.....
Waterproof cloth	211,000	321,000	14.3

Values in gold pesos: 1 peso = 96.5 cents.

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It will be seen that only in cordage and twine does the United States hold a very large share of the trade, though in canvas, duck, and waterproof cloth we are also doing considerable business. Our sales of cordage, canvas, and duck, however, have not increased so fast as those of some of our competitors; only in twines and waterproof cloth have we gained more rapidly than other countries and thus strengthened our position in the market. Italy and England are both making rapid gains in cordage and in canvas and duck, and are taking our trade in these goods.

These figures illustrate the generally insignificant position which the United States holds in the Argentine market for textiles and other manufactures of fibers. Yet our success in certain special lines and the beginnings of trade in others indicate that our exporters are not getting as large a share of the general trade as the excellence of their goods would warrant.

DEFICIENCY OF AMERICAN EXPORTERS.

The truth is that American exporters have not yet been willing to devote the time and money necessary to take a share in a market already in the possession of powerful rivals. A brief description of the methods employed by a single firm which does a business in textiles in Argentina and Uruguay amounting to $5,000,000 gold per annum will illustrate the futility of halfway measures. This firm owns or controls the output of factories in Germany, England, and Italy. They have recently acquired similar control of a woolen mill in the United States, and expect shortly to get possession of a cotton mill in Spain. They have large central houses in Buenos Ayres and Montevideo, and are about to establish one in Asuncion. Their "travelers" number several score of men, who are constantly in the field in Argentina, Uruguay, and Paraguay, and even the smallest towns and villages are reached annually or semiannually. Their warehouses are stocked with hundreds of thousands of dollars' worth of goods, including, besides the textiles which make up the bulk of their business, many of the less imporatnt commodities in demand in the general stores of the provincial towns, such as haberdashery, underwear, trinkets, ornaments, toys, hats, etc. They have always in the field one or more technical experts in textiles, whose business it is to go among the people and study patterns, fashions, etc., and to report to the factories the exact goods likely to sell well. And lastly, through their "travelers," their experts, and their banking connections, they are able to keep in such close touch with their customers that they can give the usual ten months' credit without serious danger of loss.

Competition with such firms as this is not a simple matter. Our exporters must either abandon halfway measures and go into the business on a similar scale, with similar methods and granting the same credits, or they must content themselves with the humbler task of entering into agreements with some one of these already established houses to supply it with merely a few classes of goods which its own factories do not produce. Manufacturers with small capital, attempting to enter the market independently, will meet with nothing but disappointment.

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IRON AND STEEL PRODUCTS.

DEVELOPMENT AND SIGNIFICANCE OF IMPORTS—AGRICULTURAL MACHINERY, CUTLERY, AND TOOLS.

In the following letter Special Agent Hutchinson presents a comprehensive and detailed statement of the trade of Argentina in every variety of iron and steel manufactures. His analysis of the imports presents a number of highly interesting features and should receive the attention of manufacturers of the various products named. It will be noticed that the United States plays a relatively small part in supplying structural iron, steel rails, nails, wire, etc., mainly for the reason that our prices are said to be higher than the English, although it is admitted that United States products are superior to those of our rivals. What Mr. Hutchinson says regarding agricultural implements is supplemental to what was said in his letter on this subject printed in Consular and Trade Reports for November 20, and to which the attention of manufacturers of those implements was specially directed. It will be noticed that the special agent calls attention to the fact that American machines are being imitated by Germany and offered as American-made machines at reduced prices. He also supplies a list of articles in which the United States has leadership, names those in which our competitors lead, and offers suggestions that will be of value to our manufacturers in maintaining and advancing their present standing. Mr. Hutchinson's letter is dated at Buenos Ayres, November 1. He says:

No feature of the recent growth of Argentina's foreign trade is of greater significance to the United States than the astonishing development in the purchases of iron and steel. During the four years 1895–1898 the imports of these goods averaged $16,032,000 per annum. In the five years just ended, 1900–1904, this had risen to $25,500,000 per annum, an increase of 59 per cent. In 1903 the total was $26,845,000, and in 1904, $42,173,000. The growth is so phenomenal that this class of goods bids fair soon to become the most important item in Argentine foreign purchases. In 1895–1898 the imports of iron and steel constituted only 15.9 per cent of the grand total of all imports. In 1900–1904 the percentage had risen to 19.8. For the single year 1904 it was 22.5, and in the first six months of 1905 it jumped to 29.8, passing textiles for the first time. Such a change is full of good omen for the United States, for it is in just this class of goods that our greatest strength lies.

In the Argentine official statistics of foreign trade, iron and steel goods are divided into no less than 102 subclasses. To examine all of these in detail in a brief report is impossible, but a clear idea of the chief features of the development may be had by analyzing the figures for the most important articles. Such an analysis follows. The annexed table shows the importation of the several commodities named, the values being stated in thousands of gold pesos (1 peso = 98.5 cents):

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Articles.	Average 1895–1898.		Average 1900–1904.		Percentage from the United States.	
	From all countries.	From United States.	From all countries.	From United States.	1895–1898.	1900–1904.
Iron:						
Bar, plate, etc	1,460	23.5	2,139	80.0	1.7	3.7
Galvanized	1,689	111.5	2,513	157.0	6.6	6.3
Steel rails	2,275	109.0	2,654	243.0	4.8	9.1
Wire:						
Galvanized	969	173.0	2,170	638.0	17.9	29.4
Other	1,190	57.3	762	61.0	4.8	8.0
Beams, columns, etc	488	4.8	651	.4	1.0	.1
"Keys" for rails	464	27.0	596	73.0	5.8	12.3
Nails	242	16.5	202	14.4	6.8	7.1
Screws, nuts, etc	229	3.8	414	12.2	1.6	2.9

The United States plays but a small part in the trade in any of these goods except galvanized-iron wire (mostly barbed wire). England has the largest share (47 per cent) of the trade in nails; in rail "keys," 71 per cent; galvanized iron, 87 per cent; screws, nuts, etc., 45 per cent, and in steel rails 66 per cent. Belgium is the largest seller of iron in bars, plates, etc., 46 per cent, and Germany of wire (galvanized), 42 per cent, and "other," 64 per cent; beams and columns, 45 per cent.

HIGH PRICES OF AMERICAN PRODUCTS.

The failure of the United States to hold a larger part of this trade is due mainly to the higher price of our goods. In galvanized-iron sheets we do fairly well in the heavier grades (thickness from one-eighth inch upward), but our prices for thinner sheets, such are most in demand here, are said to be considerably higher than the English. Steel rails and "keys" are chiefly imported by the English-owned railways. American galvanized wire is well liked, and the consumption is growing rapidly. Germany still holds the leading place, however, the prices of German and American makes being so nearly identical that large dealers order sometimes from one country and sometimes from the other, as slight fluctuations occur. In plain wire the United States is led by Germany, Belgium, and England, in the order named. The wire is used principally for fencing, and there is increasing demand for lighter grades. Oval wire in reels weighing 45 kilos and containing from 1,000 to 1,400 meters sells in large orders at 9 pesos gold ($8.69) per reel. In spite of the backward position of the United States, however, in all of the goods of the above list, there is some reason for encouragement in the fact that our trade in most of them is increasing. Only in galvanized iron and in beams, columns, etc., is our share smaller for the second of the two periods than for the first.

AGRICULTURAL IMPLEMENTS AND MACHINERY.

In my report, which appeared in Consular and Trade Reports for November 20, an analysis of the trade in agricultural implements and machinery was presented. Little remains to be said except to supplement the figures there given by those for the year 1904, which follow, values being stated in thousands of gold pesos (1 peso=96.5 cents).

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Description.	Average, 1895–1898.		Average, 1900–1904.		Percentage from the United States.	
	From all countries.	From United States.	From all countries.	From United States.	1895–1898.	1900–1904.
Plows	120.0	96.0	961.0	647.0	79.9	67.3
Plowshares	31.0	13.0	96.0	51.0	61.9	53.4
Harvesters	285.0	257.0	750.0	707.0	90.1	94.3
Headers	210.7	210.6	256.0	251.0	99.9	98.0
Thrashers	161.0	34.0	659.0	165.0	20.8	25.1
Shovels, picks, hoes, etc	100.0	64.0	139.0	82.4	64.0	59.2
Cornshellers	98.3	54.3	94.0	41.4	55.3	44.1
Sowers	12.5	11.3	141.0	125.0	90.4	88.7
Rakes	22.3	16.8	48.0	45.0	75.3	93.8
All others	61.8	38.8	196.3	122.0	62.8	62.2

Of all the imports into Argentina none show a more rapid increase than agricultural implements and machinery. The total purchases have jumped from $1,093,000 per annum for the years 1895–1898 to $3,340,000 per annum for 1900–1904, an increase of over 205 per cent. For 1895–1898 these goods constituted 6.8 per cent of the total imports of iron and steel; in 1900–1904 this had risen to 13.1 per cent. And the United States holds two-thirds of this rapidly increasing trade.

A DISQUIETING ELEMENT.

There is, however, one disquieting element in the situation. Our share in the trade, though very large, is less than it was five years ago. In harvesters, thrashers, and rakes our percentage has increased, but in all the other items it has declined. The truth of the case seems to be that when the phenomenal growth of Argentina's cereal production came a few years ago, the "estancieros" turned naturally toward the United States as the source of supply of the best agricultural implements. Our success in the trade stimulated competition and Europe began a campaign for the substitution of her goods for ours. This effort is meeting with a certain amount of success, and while our supremacy can not be said to be threatened, there is just enough danger to make it unwise for us to be content to rest on our laurels. Germany now furnishes 15 per cent of the plows and 26 per cent of the plowshares; and England 16 per cent of the plows, 14 per cent of the plowshares, 55 per cent of the cornshellers, 33 per cent of the shovels, picks, hoes, etc., 12 per cent of the harrows, and 69 per cent of the thrashers. German goods are gaining ground because inferior grades are put on the market at extremely low prices and long credits are given. The English are succeeding for the opposite reason, that the machines are excellent and durable, though high in price. This is particularly true of English thrashers. American machines do not stand so well the rough usage and exposure to the weather which present conditions in this country necessitate. English machines are also sold on longer credits (four to sixteen months) than the American. Other causes which militate against American agricultural goods were set forth at greater length in a previous report and to which reference is made above.

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MANUFACTURES OF IRON AND STEEL.

The annexed table shows the imports of the principal items of iron and steel other than those heretofore named. The values represent thousands of gold pesos (1 peso=96.5 cents).

Description.	Average, 1895–1898.		Average, 1900–1904.		Percentage from the United States.	
	From all countries.	From United States.	From all countries.	From United States.	1895–1898.	1900–1904.
Materials for railways	1,500.0	115.0	1,908	108.6	7.7	5.7
Cooking utensils, hollow ware, etc	604.0	22.0	473	7.2	3.6	1.5
Machines, not specified	542.0	70.0	1,194	238.0	12.3	19.9
Repairs, etc., for machines	522.0	82.0	905	267.0	15.7	29.5
Locomotives	353.0	.....	1,065	86.0	.....	8.1
Carpenters' and domestic tools, etc	269.0	54.0	443	119.8	20.1	27.0
Sewing machines	228.0	74.5	388	180.0	32.7	46.3
Materials for electric installations	225.0	76.0	193	46.0	33.8	23.8
Pipes:						
Galvanized	209.0	18.5	310	100.2	8.8	32.3
Other	193.0	8.8	283	17.6	4.5	6.2
Cutlery	251.0	3.3	248	6.6	1.3	2.6
Firearms	211.0	31.0	151	21.2	14.7	14.0
Bicycles, etc	160.0	97.0	60	31.8	60.5	53.2
Windmills and other motors	157.0	70.2	406	245.6	44.6	55.5
Boilers	64.5	8.5	126	9.0	13.2	6.2
Wire screen	51.0	.....	71	3.4	.....	4.8
Pumps	26.5	19.0	39	29.6	71.7	76.7
Needles	25.5	2.5	30	2.4	9.8	7.9
Stoves, etc	29.0	7.3	57	21.0	25.0	36.7
Dynamos	24.0	13.0	50	24.2	54.2	48.4
Typewriters	8.5	7.5	26	21.6	88.2	81.8
Bath tubs	(a)	(a)	34	27.2	.....	80.5

a Not entered separately.

The United States holds first place in eight of these classes of goods: Bath tubs, 80.5 per cent of the total; pumps, 76.6 per cent; stoves, etc., 36.7 per cent; dynamos, 48.4 per cent; sewing machines, 46.3 per cent; typewriters, 81.8 per cent; windmills, etc., 55.5 per cent; bicycles, etc., 53.2 per cent. In most of these our share is an increasing one. Only in bicycles, dynamos, and typewriters did we sell a smaller percentage of the total in 1900–1904 than in 1895–1898, and the decline in these cases is not yet serious, though it may become so if steps are not taken to arrest it by meeting the competition. This competition comes principally from Germany in dynamos and typewriters, and from England in bicycles. German dynamos get a foothold through the success of German firms in securing concessions and contracts for electric lighting, etc., and German typewriters through the production of a cheap machine which sells well with certain classes of people here. English bicycles, so far as used, are preferred because of greater durability on the rough roads of the country.

THE UNITED STATES LEADS.

The United States holds second place in galvanized-iron pipes—32.3 per cent of the total; carpenters' and domestic tools, 27 per cent, and in repairs, etc., for machines, 29.5 per cent. In all of these our share is increasing rapidly. Our chief competitors are, in pipes, England, with 53 per cent of the total; in tools, England, 29 per cent, and Germany, 26 per cent; and in repairs, etc., England, 38 per cent. There is a rapidly growing demand for American tools, which are generally

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acknowledged to be of superior finish and excellence. The only serious obstacle to our control of the trade lies in the difficulty of convincing purchasers that they are sufficiently superior to warrant the high prices asked. I have heard of no case in which persistent effort to demonstrate the economy of using these superior goods has not met with success. In axes, adzes, etc., we already have 92 per cent of the trade.

FIREARMS AND SUNDRY MACHINES.

There are three other items in the list in which the United States holds a fair share of the trade—sundry machines not enumerated, materials for electric installations, and firearms. In firearms we are only just holding our own (14.7 per cent of the trade in 1895–1898 and 14 per cent in 1900–1904). Military arms come almost exclusively from Europe. In sporting arms the United States probably has the largest trade, but there is serious competition, especially from Spain, which is sending over large quantities of very cheap imitations of American makes. In almost any gun shop in Buenos Aires one can see Smith & Wesson revolvers, for example, offered at 50 to 60 pesos ($21.50 to $25.80), while the Spanish imitations, exactly similar in outward appearance, are displayed with them and marked at 14 to 16 pesos ($6 to $6.90).

Our trade in materials for electric installations, like that in dynamos, has declined, as compared with our chief rival's (Germany), and for the same reason that the Germans have been successful in obtaining concessions and contracts for electric plants. In sundry machines, on the contrary, we are making an excellent showing, and our trade, though still smaller than England's or Germany's, has increased rapidly. In 1895–1898 we supplied 12 per cent of the total; in 1900–1904, 20 per cent.

As to the remaining items in the foregoing list little need be said. In general railway materials, cooking utensils, hollow ware, etc., boilers, and needles, our share is very small and decreasing. In locomotives, pipes, other than galvanized, cutlery, and wire screen, it is small but increasing. Purchases of railway material and locomotives are, of course, influenced by English ownership of so many of the railways here. Cooking utensils, hollow ware, etc., are mostly German, their goods being cheaper and offered in much greater variety of design than ours. Germany also holds the bulk of the trade in wire screening, but there is a growing dissatisfaction with the extremely cheap class of these goods sent out, and a preference for the higher-priced American makes is becoming apparent. The same is true of cutlery.

GREAT FUTURE FOR AMERICAN PRODUCTS.

We have now analyzed the figures which represent all important Argentine purchases of iron and steel. There are many smaller items but their aggregate amount is insignificant, constituting only 6 per cent of the total imports of this class of products. The figures we have been examining, covering 94 per cent of Argentina's purchases of iron and steel, give abundant confirmation to the universal opinion which one finds here, that there is a great future for American goods. The time is ripe for a determined effort on the part of our manufacturers, and a relatively little expense of time and money would give them a rich return. The methods to be employed will vary with the

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nature and size of the particular business. The bulk of the trade at present is in the hands of a half dozen large importing houses in Buenos Aires (with branches in the Provinces). These firms are thoroughly familiar with the market and the people, and they sell generally on long credit. Our exporters must either enter into agreements with these middlemen, which will make it worth their while to push American goods rather than others, or they must establish their own agencies and be prepared to fight for supremacy, making use of methods already in vogue. If the goods to be offered are new to the market, our exporters must be content with small profits, or even with losses, until the superior excellence of the goods is demonstrated.

AN INVITATION.

AMERICANS REQUESTED TO EXTEND THEIR TRADE.

The State Department has received from Messrs. M. E. Repetto & Co., of Buenos Aires, a letter, in which that firm expresses the belief that trade with the United States may be largely increased in certain lines of business and requests that the fact shall be made known that Messrs. Repetto & Co. desire American manufacturers to furnish illustrated catalogues, with price lists and export terms, including packages, f. o. b. New York, of the several articles mentioned in the firm's letter. The letter concludes as follows:

We have been established in this country for upward of twenty years and may freely acknowledge the fact that American goods have been steadily gaining ground and sell in preference to similar European manufactures on account of their acknowledged better finish. If manufacturers were a little more liberal and enterprising in your country and adapted themselves to the customs established in our trade, no doubt our imports of your goods would show a very considerable increase in the near future.

The Messrs. Repetto & Co. name the following list of articles which they would be willing to handle:

Naval stores, iron ware, painters' supplies, and specialties in mathematical, optical, and other instruments generally useful to engineers, surveyors, draftsmen, and painters.

General articles for shops and the household: Decorated paper, glass (crystal), mirrors, brushes, varnishes, pictures, picture rods.

Specialties for railroads and for roads in course of construction: Beams, oilcloths, canvas, signal lanterns of all kinds, shovels, picks, mallets, string asbestos, packages of rubber cloth, tuck (cloth) eagle, and asbestos.

Rubber in sheets, English leather, machines and implements of all kinds used on railroads either in course of construction or finished.

Oils for machines and for illuminating purposes.

Rubber pipes of all kinds, with suction and impelling parts of iron, copper, bronze, brass, or hemp,

Articles for shipyards, iron articles in all forms, galvanized iron for roofs, screws, metal nuts, rivets of iron, copper funnels, screw bolts with nuts, plain flat zinc (sheet), cotton tow, and tarred cloth.

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American woods of all classes, kinds, and sizes.

Manila tarpaulin capes of hemp, leather, and sedge straw, roof and fine tiles.

Ice paper, imitation of glass, easily arranged in the house.

Enameled paintings and lacquer or paint ripolin, prepared ready for use.

TRADE OF BELGIUM.

ACTIVITY OF MANUFACTURES AND CAPITALISTS.

Consul McNally, of Liege, sends a brief report on the efforts that are being made in Belgium to extend the trade of that country with the Argentine Republic. He writes:

Belgian capital seems to be attracted toward the Argentine Republic. Much space is devoted by the Belgian journals to the growing importance of the South American Republic, and the substantial compliments seem to be reciprocal, for, while Argentina favors the manufacturers of Belgium with their orders for various articles, including rails, bridge and structural material, etc., the Belgians confidently enter into their business enterprises as well as in establishing independent concerns entirely owned and controlled by Belgian capital. From the present condition of Argentina the Belgians argue that it is a prolific field for investment, and many financial journals advise an entrance into new business organizations, basing their advice upon the success achieved by Belgian companies already established there.

The companies in which the Belgian capitalists hold the greater interests are the Crédit Foncier Sud-Américain, capitalized at $482,500; the Société Hypothécaire Belge-Américaine, $2,316,000; the Compagnie Belge-Argentine de Chemins de Fer, $482,500, and the Société Industrielle et Pastorale Belge-Sud-Américaine, $2,509,000. These companies have been operated for some time and are developing in a most satisfactory way. The two other enterprises of more recent creation are the Compagnie des Tramways de Rosario, $2,412,000 and the Compagnie Belge-Argentine des Tramways de Buenos-Ayres, $2,702,000. There are now about 265 miles of single-track tramway lines in Argentina which are operated by four companies. The latest concession to the Compagnie Belge-Argentine will increase this number to five with a mileage of over 300.

COMMERCIAL ACTIVITY.

Minister Beaupré writes from Buenos Aires:

The Herald of this city announces that there are 14 steamships in port awaiting a chance to berth in the Buenos Aires docks and that the block that now exists may continue for months to come. There is to-day afloat for the Rio de la Plata about double the tonnage of cargo that was afloat for the same destination at this time last year. From the 30th of September to the 14th of October, the first two weeks of this month, steamers of the Housten Line containing 36,000 tons dead weight of cargo sailed for Buenos Aires. This is more than double the amount that was dispatched during the same period of 1904 by the Housten Line, which is one of the largest freight carriers doing business here, but an average extending over a much longer period of time,

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with information received as to what is coming, shows the general increase to be about 100 per cent. Of this 36,000 tons, shipped in two weeks, 24,800 are coming from Liverpool and Glasgow and 11,195 tons from New York. One of the steamers from England is bringing 9,435 tons dead weight of cargo, and the 11,195 tons from New York is all in one steamer, and is one of the largest cargoes ever shipped from the port of New York for Buenos Aires. Everything indicates the most active season in the Rio de la Plata shipping circles on record.

URUGUAY.

NEED FOR DIRECT STEAMSHIPS.

KINDLY FEELING FOR AMERICANS—REASONS FOR MEAGER TRADE WITH THE UNITED STATES.

Consul O'Hara, of Montevideo, furnishes reasons for the relatively meager trade between the United States and Uruguay. These reasons are an iteration of what others have written on the same subject and can be embraced in a very brief sentence—failure to study market conditions and absence of permanent representatives. Mr. O'Hara expresses the opinion that direct steamship communication between the two countries would prove an active agency in the promotion of trade with the United States. His report follows:

If it be true, as often stated, that the United States does not secure its fair share of the trade of the South American countries, the fault is mainly due to a lack of energy in this direction on the part of the manufacturers and exporters. I am frequently asked by American inquirers whether or not there is any prejudice against American products in this country. My answer is that there is no prejudice against them as such, but that, on the contrary, they are in favor and rather preferred when known. But it must be remembered that American-manufactured goods of all classes, in this country particularly, are offered for sale by men not Americans—men who have no interest in our country or in its products except as they may obtain a profit from the sale of them.

WHAT EUROPEANS ARE DOING.

The Englishman, the Frenchman, the German, and the Italian are here representing the products of their respective countries. They have brought capital from their home countries, and they have competent men here to manage it. They have established large importing houses, and have learned the language of the people, their manners, and customs. They study and become familiar with the people's wants and adjust their orders for manufactured goods accordingly. They keep their home Governments and their producers constantly informed as to the needs and demands of their customers, and they naturally give preference to the products of their countries, using every honest endeavor known to business in promoting these interests. They have regular and well-equipped steamship lines for passengers, freight, and

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mails, and keep themselves in close touch with their own countries. I would respectfully refer our manufacturers to these methods and advise that they be closely followed as far as practicable. There is no country that can with truth claim this trade. The people of Uruguay have good business qualities, and will buy where they can secure the best product for the least money.

PERMANENT PERSONAL REPRESENTATIVES.

I am convinced that Americans may have their share of this business if their claims are properly presented. The question, therefore, naturally arises: What is necessary for the purpose of securing a proper representation of their products? My observation leads me to the conclusion that there is but one way, and that is through the agency of permanent personal representatives, in connection with proper transportation. The British merchant offers an American article only when his customer demands it, or when, as it often happens, his own country does not produce that which is required. The German merchant extends his business acumen one step farther than this, and when a particular article manufactured only in America is demanded, the astute German notifies his manufacturers and sends a sample of the article required, and very soon he is amply provided with a cheap imitation, which he places upon the market as an "American style" or "American shape" or "American pattern," as the case may be, and this without disclosing the name of the maker. A gentleman of this city, prominent in business circles and the owner of a large estancia, told me that he went to a hardware store of this city conducted by a German firm, for the purpose of buying a break-in plow. He was first shown a German article. He informed the salesman that he wanted an American plow, and he was shown an American pattern. This was rejected, having been recognized as an imitation, and then they produced and sold to him a genuine American plow. I cite this incident only to show that while American articles are sold here to a limited extent, they are not pushed to the front as they should or would be if we had an active, energetic American representative here to see that our products have a fair show with those of other countries.

IMPORTANCE OF DIRECT STEAMSHIP LINES.

The same people who push our merchandise aside and force that of others to the front push our country aside and say that while we are a great producing nation we have no facilities for marketing our products. Here we are forced to silence. The records show that during the fiscal year ending June 30, 1905, there was exported from this country to the United States goods to the value of $3,998,175 American gold, and that not one dollar's worth of this amount left this port on an American vessel. Of the imports to this country from the United States during the same period, estimated at $2,500,000, but two cargoes, each with less than 1,000,000 feet of lumber, came in American sailing vessels. The great bulk of the exports from and imports into the United States, so far at least as Uruguay is concerned, is carried in foreign ships. Only a few days ago the Government of Argentina passed a law granting a subsidy amounting to about $58,000 gold monthly for a term of ten years available to two steamship lines

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plying between that country and Europe, all because the people of Europe are energetic and looking to their own best interests. My remedy for all this is:

First. Establish a line of American steamships for passengers, freight, and mail between New York and the River Plata (the mail received October 6 was posted at New York September 2), and in that way make this great market within easy reach of ours, and provide the American people with a more rapid and easy means of communication with this portion of our continent, of which most of our people know so little.

Second. Send here good American agents, with business training and experience; let them establish permanent houses, and give these people to know and to understand that they are here to stay, to cater to their wants and to supply them.

Third. Study local conditions and customs, become familiar with the requirements of the markets, and adjust our trade to meet these demands. Then we will be successful. This is a great country, with an extensive and constantly increasing market. A proper investment of American capital and energy will, in my opinion, bring ample returns.

BRIDGES AND HIGHWAYS.

Consul O'Hara supplements a previous report on the subject of highways and bridges in the interior of Uruguay. He furnishes a translation of an executive order directing how the money heretofore appropriated, $3,102,000 American gold, for such improvements shall be expended. He has also asked the authorities to defer the letting of the contracts for machinery and materials for a sufficient length of time to enable American manufacturers and contractors to submit bids. He feels confident that three or four additional months will be granted. Mr. O'Hara urges upon American manufacturers and exporters of appropriate machinery and materials the necessity for prompt action. This is only the beginning of the work of internal improvement of Uruguay. The people are very much interested and in earnest and will give their hearty approval to its continuation. * * *

The translation is on file in the Bureau of Manufactures, Department of Commerce and Labor, where it may be examined by interested parties.

COLOMBIA.

QUARRYING AND MINING INDUSTRIES.

MANY MINES, BUT LITTLE MINERAL—REPORTS FROM DISTRICTS.

Consul-General Snyder, of Bogota, in reply to inquiries concerning the mining, quarrying, and kindred industries of Colombia, furnishes the following details:

In Colombia mines of nearly every description exist, but in no case up to date have minerals been found on a large scale. The three principal departments productive of precious metals are Tolima, 600 miles from the Atlantic coast; Antioquia, 450 miles from the same coast, and the Cauca, which stretches from the Pacific coast landward.

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TOLIMA.

The gold veins, with very few exceptions, are superficially rich, gold pinching out on penetrating some 10 to 20 fathoms. Alluvial gold washings are more abundant and give better results, being a less speculative enterprise.

Free gold quartz veins are the most worked in Tolima, as no reduction works have been set up to treat compound minerals, although many lodes exist and remain untouched.

Silver mines are abundant in this department, and several mines export their concentrated minerals to Swansea, England.

Asphaltum is found in clear block veins in the south of the department, 900 miles from Atlantic, and is shipped to Boston as a basis for varnishes.

Marble.—Several mines exist in this department 600 miles from the coast and from 10 to 30 miles from the Magdalena River, all unworked.

Coal.—Very few mines have been found, and none are worked.

ANTIOQUIA.

This is essentially the gold field of Colombia. Considerable weight of gold is exported annually, the greater part being obtained from alluvial gravel by pan washing by the natives, but on the other hand valuable gold mines are being worked at deep levels to advantage. The district of Remedios is rich in good lodes and refractory ore, and compound minerals are treated by one or another process.

CAUCA.

This department is the most important of all and the least explored. It is rich in many minerals and the few mines at work are a success.

CUNDINAMARCA.

This department has coal mines, some being worked successfully for home consumption.

Iron is found (700 miles from Atlantic) and one mine produces, or could produce, enough for the entire requirements of the country.

Copper is found in many localities, but no large deposits are known to exist.

BOYACA.

This department produces copper for local requirements, and one mine is reported to be immensely rich and abundant in mineral.

Emeralds are found in great numbers and of superb quality at Muzo mines in this department and 75 miles northwest of Bogota. Work is carried on at Muzo on the quarry system, the rock being of a calcareous nature and not hard.

Sandstone.—The eastern range of the Andes is in great part formed of sandstone. Bogotá, the capital, with a population of 75,000, not 100,000, as generally stated, stands at the foot of this range, and immediately behind the city and also to the north and south splendid sandstone quarries exist, all the modern buildings being built of it. Immense blocks are blasted or barred out from the mountain face, and hundreds of native dressers chisel out the columns or squares required. It is considered equal to the French sandstone, and many different shades exist.

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In several places waterfalls could be utilized for motor power, and no doubt a very flourishing and paying enterprise could be easily established by erecting modern machinery for dressing stone for every conceivable use. The cost of dressing a linear foot of average hard rock by chisel is, approximately, 80 cents per foot, and the softest rock used is dressed at the rate of 50 cents gold a foot. The dressed stone is transported by ox cart to the city. Half-dressed rock (rough surface) for constructing purposes costs at the rate of 10 cents the foot.

Further information respecting the quantity of dressed and semi-dressed stone used in the entire city and suburbs could be obtained only by interviewing all the principal constructors and architects, and also the municipal council summing up their data and adding 10 per cent for consumption of material used by small builders in odd jobs. All the principal streets are paved with this stone, sets of 8 by 8 by 8 inches being the accustomed size, and the sidewalk usually 3 by 1½ feet by 4 inches each flagstone.

ECUADOR.

MARKET FOR AMERICAN PRODUCTS.

READY SALE FOR LARD, KEROSENE, AND LUMBER.

Consul Dietrich, of Guayaquil, replying to inquiries from the managers of the proposed floating exposition regarding the character of the markets in Ecuador, writes as follows:

The main articles of value that are imported from the United States that are ready salable products are flour, lard, kerosene, and lumber, which of late years have only been imported from the United States. The bulk of the shoes handled here also come from the United States, as well as the majority of nutritious articles and a considerable amount of drugs, paints, oils, candles, thread, cordage, hardware and machinery, wines and liquors. Some American hats are also handled here, but the bulk of them are brought from Europe. As to the class and kind of goods that would be particularly susceptible of display here, I might say all kinds of merchandise, if the quality and price is attractive and interesting to the buyers. That means, of course, that the quality should be equal or superior to the same class of merchandise offered by the European markets. The price must be equally as interesting in order to receive the consideration desired.

Therefore it is quite natural for the merchants of Ecuador to be interested in all kinds of American merchandise, especially as there are no factories of importance here of any kind. The close competition offered between American and European markets will, to a certain extent, cause the merchants of this country to be more alert and make a more exhaustive investigation of prices and terms offered them. In preparing yourselves to meet competition in this country you will also bear in mind the fact that nearly all the merchants here have from the very beginning of their business career acquired the habit and custom of buying principally from European manufacturers on account of the wide latitude given in paying for their merchandise, and for which reason they are still in close touch with the said manufacturers.

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FACILITIES EXTENDED BY EUROPEANS.

The merchants here claim that European manufacturers always extend to them a credit from six to twelve months' time without interest, which terms they claim they can never get from manufacturers and jobbers in the States. Therefore as long as European manufacturers extend more liberal terms for the payment of merchandise than the manufacturers and jobbers of the States are willing to extend it will certainly be very hard to get these merchants to buy other articles of merchandise in the States than such articles of merchandise that can not be duplicated or bought for less money in Europe.

For this reason any display of goods brought to this country by your floating exposition must by all means, if expected to draw the attention of buyers, be at least equally attractive in make-up, price, and quality as compared with the same class of merchandise offered by the European markets.

PERU.

NEW WATER WORKS.

CHANCE FOR MANUFACTURERS OF IRON PIPES.

Consul-General Gottschalk, of Callao, Peru, reports that the question of providing Callao with a suitable water supply is being considered, and that before long there may be opportunity for the placing of American pipes and kindred material at Lima, Peru. The consul-general writes:

The situation, according to a recent report by C. Rumsky, a sanitary engineer employed by the town council of Callao, confirms the opinion already expressed many months ago by Dr. B. J. Lloyd, the marine-hospital officer detailed for duty at the consulate-general. It seems that the water supply of the port, coming from semiartesian wells at the Puguio del Chivato, near La Legua, some 3 miles inland, while in itself wholesome enough, is contaminated at some point in its journey by the waters of the Rimac River, which bring the sewage of the near-by city of Lima.

It is proposed in the report of the engineer above mentioned to furnish Lima with a direct sewage outlet to the sea instead of to the river, a comparatively easy matter owing to Lima's altitude above sea level (about 500 feet). The approximate length of the pipe line would be about 6 miles. Mr. Rumsky's report has been transmitted for action to the alcalde of Lima, Dr. F. Elguera, and to the director of public health, Dr. Julian Arce, to both of whom proposals may be addressed.

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WEST INDIES.

REPUBLIC OF CUBA.

GROWTH OF THE CATTLE INDUSTRY.

CLIMATIC AND OTHER ADVANTAGES—CATTLE THAT THRIVE BEST—INDUCEMENTS FOR INVESTORS.

Mr. Henry L. Janes, secretary of legation at Habana, furnishes a comprehensive report on the cattle industry of Cuba which will be found valuable to those Americans who may be contemplating investments in that island. The report was written in response to many requests that have reached the legation from business men in the United States. Before preparing the report the legation at Habana conducted a correspondence and held interviews with banks and leading ranchmen on the island to fix clearly the points that have so often been raised by Americans desiring to establish themselves in Cuba in the cattle industry. The report follows:

No country in the world, perhaps, possesses more natural advantages to attract the cattle raiser than Cuba. A wide expanse of perennial pasture, devoid of poisonous plants and free from dangerous reptiles, a climate exceptionally mild and even, knowing nothing of the extremes of temperature, with no frosts or biting winds, no hot prostrating days, and the absence of cyclones and earthquakes, are all the elements of an environment almost ideal for the successful and economical raising of cattle.

The ravages of the last war destroyed almost the entire stock of cattle. Artificial restrictions tended to maintain the low point reached in the cattle supply and to even further depress it. The exorbitant customs duties, which virtually prohibited the importation of stock, and the enormous tax on each head of cattle, postponed the restocking of the island until after the last war. Cuba has for the past several years been passing through a period of great cattle importation from Central and South America and from the United States. It is estimated that in 1894 there were 2,485,766 head of cattle in the pastures of the island, representing a value of $74,572,980. The last Government report shows a cattle registry of 1,903,069 head, which may be conservatively appraised at $51,000,000. Following the census of 1899, only 3 per cent of the farms of the Republic were under cultivation. To-day reliable estimates fix the cultivated area at about 16 per cent. The province of Camaguey forms one vast expanse of magnificent pasture land. Fine lands in this province are offered at exceedingly moderate prices, and on terms that should interest the American cattleman. Good tracts may be leased at prices ranging from $15 to $30 per caballeria (33⅓ acres). Ten dollars is no unusual price to pay for well-watered pasture of the best grasses, and the price for the unplanted areas falls sometimes as low as $1 per acre. Pastures of the pajilla or canamazo grasses can be obtained much more cheaply than those

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planted with guinea or parana. The best cattle lands are secured by seeding cleared strips of timber land with one of the imported grasses.

Right here, and in response to many special inquiries regarding the manner in which land may be leased in Cuba, a few words may be interposed. Land may be rented by the acre (or caballeria) or by the head, and for a term of months or years. Many importers have found it most profitable to turn over their stock to the proprietor of land to fatten on shares. From the selling price of the cattle is later deducted the cost of pasturage, if any, and the difference is usually equally divided according to a special agreement between the owner of the land and the importer. Pastured by the head, good grass may be obtained in close proximity to Habana for 50 cents per head. As the distance from the Habana market increases the cost of the pasture decreases.

QUALITY OF THE GRASSES.

The Parana and Guinea grasses give the best results in Cuba. Some success has been had with Bermuda grass, which grows rapidly in the hardest and driest soil, but the other-mentioned grasses are the favorites. Guinea grass is more of a sorghum than a grass, possessing with its large element of sucrose very high fattening qualities. This African grass grows sometimes to the height of 15 feet, often entirely hiding from view a herd feeding in a clump of it. Guinea requires little moisture and resists drought better than its chief rival, the Parana.

Parana grass, a native of South America, grows best in well-watered tracts and thrives in the damp, heavy soil of the valleys. It proves to be extremely hardy and resists all attacks when once it obtains a good start. Its habits of life are very different from those of the Guinea, running close to the ground and sending out a new root from the stem at every contact with the soil. Of the cultivated grasses this is the most prolific, and sustains more cattle to the acre than any other.

The indigenous grasses are not rich enough to fatten stock well. Into the natural "savannas," where grow pajilla or nanamazo, is turned only the breeding stock. In some localities the native grasses, when young, make fairly good pasture, but the main reliance must always be placed on the cultivated varieties.

As to the fattening values of the pastures of Cuba, naturally reports must differ widely, according to the soils, drainage, etc., of the localities. It is sometimes stated that 1 acre of grass will keep one steer fat the year round. The experience of the most reliable cattlemen does not substantiate this statement. It may be safely computed that not more than 20 head of cattle can be fattened on a caballeria; 10 to 12 head of cattle will easily find sufficient pasture on a caballeria and be kept fat the year round, and this estimate is most generally accepted.

TYPICAL RANCHES.

The typical Cuban ranch covers an area of from 1,000 to 1,600 acres. The allowance of pasture per head always falls far below that generally known in the United States. Instead of 10, 15, and 20 acres per head it runs as low as 1½ acres per head in Cuba. The island climate renders stabling or shelter of any kind absolutely superfluous. When

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it is further said that the cattle find plenty of pasture the year around without necessitating any expenditure for grain feed, the possibilities for large profits are at once seen. Good help can be secured more cheaply in Cuba than in the United States; $30 Spanish silver, or about $22 United States currency, per month is adequate, the help finding themselves, or $21 with board. Overseers may be secured in Camaguey for $55 per month with board. Cattle raisers find that one man can take care of much more territory here than in the States. Further economy results from the manner of fencing the ranches. Scrubs or cacti play the rôle of fences, forming a barrier that lasts the life of the tree. One good rider will easily take care of all the fences of a large-sized ranch.

PRESENT STOCK AND PROSPECTIVE INCREASE.

Glancing a moment at the island as a whole, the various Provinces contribute to the general total of 1,703,069 head of cattle on the registration books on December 31, 1904, as follows: Habana, 289,924; Pinar del Rio, 151,765; Matanzas, 257,429; Santa Clara, 551,300; Camaguey, 235,101; Santiago de Cuba, 217,550. Habana imports the largest number of cattle (178,474), followed by Santa Clara with 74,478 and Santiago with 53,519 head.

How great a rôle the importer plays in the rapid restocking of the island is clearly indicated by a table showing the source of increase and the causes of the decrease of the cattle during the past year. About 62.4 per cent of the total increase must be credited to importation.

Description.	Partial total.	General total.
Stock registered December 31, 1904	1,315,825	1,315,826
Increase.		
Natural increase	226,501	
Imported	375,287	
		601,788
		1,917,614
Decrease.		
Slaughtered	194,913	
Died and killed by inspectors as sanitary measures	5,825	
		200,738
		1,716,876

CONSUMPTION AND PRICES OF MEAT.

The Government report for the calendar year 1904, which has taken into account only the cattle slaughtered in the "matederos municipales" (municipal slaughtering houses) places the quantity of meat consumed by the general public at 34,611,645 kilos (or about 70,000,000 pounds). Prices ranged from 14¼ to 54½ currency per kilo (from 6.46 to 24.7 cents per pound). In Pinar del Rio meat secured the highest price (San Juan y Martinez). The lowest price for meat is quoted for Guines, Habana Province. Usually, however, in Camaguey, the center of the cattle-raising industry of the island, obtain the lowest prices. In Habana the price of beef ranged during 1901 from 18.1 cents per kilo to 68 cents per kilo. The years intervening between that date and 1904 mark a constant fall in the price of this commodity. In that year from 14.5 to 45.4 cents was paid for it in the market.

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DIVISIONS OF THE INDUSTRY.

The general cattle-raising industry may be considered in each of the three mutually independent branches into which practical business methods divide it:

(1) The breeder aims only to bring the stock to the highest prolific point; the calves he places on the market when yearlings.

(2) The improver buys yearlings or 2-year-old steers, feeds them, and gets them ready for the fattener within eight or twelve months' time.

(3) The fattener (feeder) buys cattle of 2 years and more and fattens them for the market (an overwhelming majority of the cattlemen of the island are to be included within this branch of the industry). This operation requires from six months to one year, according to the condition of the stock and the quality of the pasture, and nets a profit of from $8 to $12 per head.

Americans are beginning to import cattle from the States and from Mexico and Venezuela, and report excellent profits.

NATIVE PREJUDICES.

The Cuban cattle demand has certain peculiarities that sharply distinguish it from that which is recognized as the normal in the United States. Horses are comparatively few in number on the island; mules are not substituted therefor; oxen are the chief draft animals. The Cuban says that mules "are cowards in the mud, but that oxen will pull anywhere." He is very conservative and does not look with favor on stock that differs in any particular from that which he has long known. He objects to the form of the American animal and often selects in preference Central and South American stock of very inferior quality. A more tangible objection to many of the animals that arrive from the States is directed against their lack of horns to which the yoke may be fastened. This means much to the farmer in a country where the cattle are more valuable as draft animals than as beef. A good yoke of oxen brings easily $150, while $35 is about all that can be obtained for each animal in the market for beef.

SOURCES OF SUPPLY.

Jamaica, Porto Rico, Venezuela, Colombia, the coast districts of Mexico, Texas, and Florida furnish Cuba with most of the imported stock. No careful selection of breed in the purchases abroad is yet indicated, though among the more intelligent ranchmen some interest is beginning to be aroused in graded stock. A limited demand, which is certain to greatly increase within a short period, has been created for the Herefords, owing probably in great part to the ease of identification because of their white faces. Several importers have brought in at a venture a considerable number of Herefords and Shorthorn stock, which find to-day a market that was practically unknown last year. Cuba is beginning to demand a very much better grade of beef. Among the Spaniards and Cubans an interest is shown in the better breeds and in the scientific methods of breeding that means that importers will have to exercise more care in the future in the selection of their cargoes of stock for the island.

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At present the best American cattle come from Texas. It is not safe to import cattle from districts of this State lying very far from the coast because of the proximity to the "quarantine line." It is important to import only stock that has had "Texas fever." Cattle with "tick" are immune, having through this parasite been inoculated with the cattle fever. Animals that have lived near salt water do well in Cuba. Florida cattle fatten probably faster than any other of the imported stock. In five months' time they are ready for the market. But Texas cattle of all the stock on the pastures of Cuba are the best beef cattle, giving, according to experiment conducted under Government auspices, more pounds of beef than any other when dressed out. Accessibility to the Cuban market has increased the values of the Florida stock over 100 per cent.

CATTLE IMPORTED AND VALUATION.

Mr. Janes furnishes a table showing in detail importations into the island for the twelve months ending June 30, 1905. The total values are over $6,000,000, of which sum importations from the United States were valued at $1,927,676, or about one-third of the total. From Venezuela the importations were valued at $1,667,000, from Colombia $1,104,000, and from Mexico $909,000. Importations were also received from several other American countries, including Honduras, Nicaragua, Haiti, Porto Rico, Santo Domingo, and the English Antilles. The following table shows the number and value of the various classes of cattle imported:

Animals.	Number.	Values.
Cows for breeding	77,374	$1,327,565
Calves—breeding stock	19,828	231,938
Cows with young	26,271	518,330
Bulls—Jersey, Hereford, Guernesey, etc	411	29,146
Yearling calves	21,888	233,742
Florida cattle	31	287
Mexican cattle	547	12,238
Venezuelan and Colombia cattle	5,232	141,138
Cattle for fattening	197,660	3,561,135
Cows unfit for breeding purposes	940	18,050
Total	350,382	6,073,599

In connection with the above table and in explaining their various divisions, an enumeration of the duties levied on cattle imported is of value as well as in itself and alone. In the free list are placed bulls for breeding purposes of the best races, viz, Jersey, Guernesey, Derwin, Durham, Hereford, and the bulls of Porto Rico and the Argentine Republic of proven pedigree.

The following pay the designated charges per head:

Bulls of Florida, more than 500 pounds	$1.00
Bulls of Honduras, more than 600 pounds	5.00
Bulls and fat cattle of Mexico, more than 700 pounds	6.00
Fat cattle of Venezuela and Colombia and other countries not mentioned, exceeding 800 pounds	8.00
Cattle for fattening not reaching the mentioned weights	2.00

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DISEASES AND THEIR TREATMENT.

No cattle epidemic has been known in Cuba for many years. The island lies within the Texas fever zone, and this fever is prevalent in all parts of the island. "Black leg" yields to the same treatment as in the States, though the ignorant "guajiro" sees no protection from it short of an immediate burning of the afflicted animal. The virus furnished gratis by the Government affords perfect protection against this disease. The "screw worm," the larva of the "blowfly," is a source of considerable annoyance. The "blowfly" deposits its eggs where the skin is broken. Crude chloroform and pine tar are most effective in ridding the cattle of this pest. Young calves are usually kept penned up for several days after birth to lessen the danger of an attack on them by the screw worm. The most formidable enemy that is known to the ranchman of Cuba is the "cattle tick." Newly imported cattle and cattle in a poor condition are especially defenseless against this. The "tick" and Texas fever go together. It is argued from the fact that native cattle are peculiarly exposed to tick that the tick has been imported into the island. Cattlemen urge that the Government take measures to rid the country of this pest which bids fair to take full possession of the pastures as is reported to be the case in Jamaica.

On the smaller ranches the tick-infected cattle are lassoed and sponged down with aguardiente or cebadilla. This treatment is very expensive because of the high price of the remedy and the danger of injury to the cattle. Better results are secured by driving the cattle through a shoot connected with a narrow closed stall where the animal may be closely confined and washed down with a preparation. In the States a form of crude petroleum, Beaumont oil, has been successfully applied and its use is indorsed by many Cuban cattlemen. The extremely high tariff on this product practically prohibits its general use. Cattlemen suggest that the Government make a series of experiments with the view of ascertaining the best and cheapest method of protecting the cattle of the island from the tick. Dipping tanks might be constructed at all the importing points of the Republic, through which the incoming stock may be run and rid of the tick. Other tanks could with advantage be built in the cattle districts at convenient spots for the use of the cattle owners. Some steps clearly should be taken to protect the cattle from this persistent parasite.

REASONABLY SAFE INVESTMENT.

Owing to the small amount of capital at the disposition of the average native cattle owner he can not afford to pay much attention to the breeding of stock. His sole idea is to fatten the cattle as rapidly as possible for the market and so turn over his money within the minimum period, usually from six to twelve months. No "cattle banks" exist in Cuba as in our Western States, and bankers here see little likelihood of the establishment of any such institutions until the chattel-mortgage laws of the island undergo considerable modification. This is often discussed as one of Cuba's present needs, and has been urged by the newly appointed secretary of agriculture.

Cattle raising in Cuba affords many inducements to the investor. It should be noted at the outset, however, that the rancher makes noth-

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ing on the "first cost" of the cattle, the only profit being on what is added to the weight of the animal by feeding. This is particularly true for the months of July, August, September, and October, when fat cattle are more plentiful. During the rest of the year feeders usually count on a profit of one-fourth of a cent per pound over and above what is made on the increase in weight. A natural increase in the herd of from 75 to 80 per cent annually can be reckoned.

For the investor having control of from $5,000 to $35,000, the field is very attractive, and the difficulties of the first year once successfully passed the subsequent year should prove very profitable. Twenty thousand dollars evenly divided between land and stock should nicely establish the American in the business, according to those experienced in the matter in this country. Land is rapidly increasing in value; cattle property bought soon after the war has advanced 100 per cent over the original purchase price.

Summing up the whole situation, and taking a very conservative view of the many peculiar advantages that Cuban conditions offer, 10 to 15 per cent can always be assured the investor on capital placed in steers and calves, and a profit of 20 and 25 per cent is not an unreasonable return realize from a well-handled ranch.

SUGAR AND TOBACCO.

FAVORABLE OUTLOOK—NEW MACHINERY INTRODUCED.

Consul Baehr, of Cienfuegos, reports that the sugar estates located in that district are actively preparing for grinding the new sugar crop. He writes:

On many estates new machinery has been installed in order to cope advantageously with the expected increase of cane, as the year has been in general very favorable to the plant and it is believed that the crop will be quite satisfactory. Due to the late rains, which have been very beneficial, the fields present a good appearance and the plant is growing as well as could be desired; but in some parts of the district, especially on high grounds, the plant has already begun to show the flower (guin), a sure sign of approaching maturity. In consequence some of the ingenios will have to start grinding from one to three weeks prior to others. In all "bateyes" or cleared grounds, where the buildings and machinery are located, the last preparatory steps are being taken, in order to have everything in perfect working order, and on estates where no new machinery was installed the old plants are put in first-class condition. Railway companies are preparing to handle with increased facilities the cane and later the sugar produced along their respective lines.

THE LABOR QUESTION.

A problem of the greatest importance, which has not escaped the planter's attention, and which so far has not been satisfactorily solved, at least to the satisfaction of the planters and manufacturers, is the much-talked-of labor question. For the last two years the scarcity of able field hands has been a serious drawback to the planter, and resulted in financial losses, either through the loss of a portion of the crop or

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through the long drawn out "winding up" of the season. Immigrants who have arrived within the last six months at the different ports of the island will to a certain extent relieve the general demand for efficient hands, but, as most of these laborers are inexperienced in field work peculiar to sugar cane or other agricultural pursuits of the island, the shortage will necessarily continue this season. These new hands will, however, all find employment at moderate wages in places on the estates where skilled labor is not essential. The general outlook for the coming season is fair, as compared with other years, so far as sugar is concerned, and if the cane keeps in its present good condition and the hopes of the planter as to prices are realized there will be no ground for complaint.

TOBACCO.

The rain has somewhat brightened the outlook of the tobacco planters. It has rained copiously in valleys and hills where this plant is mostly cultivated, and it came at the critical moment, both for the plants that were already set out and for those which are being planted at present. The resulting benefit can not be fully estimated at this moment, but it is generally believed that if there are any more such rainfalls before the end of the year the crop will be safe and will yield very good results, both in wrappers and fillers of the best quality, probably superior to last year's leaf. The fields are presenting an appearance of high exuberance of growth, and the plague of all sorts of insects, which usually attack the young plant, is conspicuous by its absence. There will be no need of replanting as all the weather conditions have so far been most favorable. If nothing extraordinary changes the present outlook, this year's tobacco crop will fully realize the planter's hope, especially if the prices will correspond to the plants' superior yield.

HAITI.

CONCESSION TO AMERICANS.

PROJECTED RAILWAY THROUGH A RICH SECTION.

Mr. M. F. Powell, minister to Haiti, reports that a concession to construct a railroad from Gonaives to Hinche, and from thence to Port au Prince has been granted to two American citizens, Messrs. Louis Dalmas and E. A. Blanton. The minister writes:

This concession is a most valuable one, as the proposed line of the road is through the central part of the Republic and through the most valuable timber belt of some of the finest cabinet woods in the world. I am informed there are to be found within this belt mahogany trees from 8 to 9 feet in diameter. Aside from this there is to be found satin wood, ebony, rosewood, a very fine quality of cedar, and other woods, which, when introduced to commerce, will rival those above named in the making of the finer classes of furniture and the interior decorations of houses. It will also pass through the great mineral belt, where may be found copper, gold, silver, iron, and possibly other metals. The above are known to exist and companies are being formed to develop them. It will also pass through the petroleum belt which

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has recently been discovered. This petroleum is said to be better than that found in Azua, and is said by those who have tested it to have a parafine base.

COUNTRY TRAVERSED BY THE ROAD.

The road as planned goes through virgin territory and parts of it are even unknown to the Haitians themselves. It passes through the most alluvial part of the country and will be the means of developing it, thus adding to the revenue of the State. The President, General Nord, has favored this enterprise, has given to these gentlemen his aid in very many ways, and has removed from their path obstacles they could not have overcome by themselves. The road is to be completed within thirty months according to the terms of the concession. It is eventually to reach Port au Prince, which will be its southern terminus, while Gonaives will be the northwestern terminus. Both places have fine harbors and are well situated for all the needs of commerce.

A FURTHER CONCESSION.

Since this concession was granted the President has offered to the same gentlemen the option to operate the road that the Government has lately constructed from Cape Haiti to Grand Riviere. The matter is still under consideration. If accepted, a small branch road will have to be built from Grand Riviere to St. Michel, through which place the main line extends. This will give the Republic a continuous rail route from Port au Prince to Cape Haiti, which will be a great advantage to the Republic in point of revenue to be derived from it, and will eliminate to a great extent travel by boat, with all its attendant inconveniences, which is the only means now open to the traveling public. The southern terminus of the road passes through a large fruit and cotton growing district; in a word, the road as planned passes through virgin territory. This concession may be considered as the most important that has ever been granted to foreigners.

AMERICAN OPPORTUNITY.

UNITED STATES TRADE MAY BE EXTENDED.

This legation has at various times during the past few years called the attention of our merchants to the great possibilities of trade with this Republic; that it was due that the greater part of the incoming and outgoing trade should go to the United States, and that this would be the case if a serious effort should be made by our merchants. In order to do this it would be necessary for representatives to be sent here who are conversant with the language spoken, and who should remain and study the tastes of the people and find out what are their needs. Moreover, it would be necessary to change American methods of packing and cutting the goods; the limited means of travel should be studied, and many minor details that would fall under the eye of a practical man thoroughly acquainted with the object he had in view.

INCREASE IN TEXTILES.

During my recent leave of absence I made careful inquiries among our merchants who are engaged in business with Haiti, and since my return have seen many local merchants and many others not Americans who are getting goods directly from the United States, and who heretofore bought exclusively in European markets.

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I have been informed that our trade in textiles within the four years has increased 50 per cent. One large house that deals exclusively in these goods states that it nearly approaches 75 per cent. Before this period only the coarser line of textiles was bought in the United States, and the finer from England, but for some time past all the finer qualities of this class of goods have been bought in the United States, except shirtings, which the English can sell cheaper than our manufacturers.

HARDWARE AND FANCY ARTICLES.

In hardware England has a slight advantage, but our trade in this direction is increasing annually. One of the principal articles in this line is zinc roofing. Nearly all the houses are covered with this. England has at present the command, for the reason, it is stated, that the zinc roofing that comes from England is better than that received from the United States. It is also said that calicoes from England are better than those of the United States.

France still commands this market for jewelry, bric-a-brac, perfumery, and articles of a like nature, as Germany does for the ordinary or rougher class of pottery.

A RIPE FIELD.

The provision trade, which was exclusively ours, has suffered a great decline during this period. This arises, not from any competition from other markets, but is due to the great stringency that has existed in the Republic for the last three years. The laboring class and the peasants being unable to buy this class of provisions, have had to content themselves upon the natural products of the country. This trade will return to us when the country is again prosperous.

While our commercial relations have been largely advanced, I believe the field is ripe for extension on many lines. If a depot should be established at this capital, or at some of the principal cities of the Republic, exhibiting what we had to sell, with an experienced man in charge to explain the utility of the exhibits, the advantage in handling, the durability, and such other matters that would induce the merchants and the people to buy, our trade with Haiti would be largely promoted. The Republic has a great future, and we should endeavor by all means in our power to reap the full benefit of its prosperity.

TRINIDAD.

TRADE WITH THE DOMINION.

CANADIANS PUSHING PERSISTENTLY FOR TRADE.

Consul-General Holloway, of Halifax, furnishes interesting information regarding trade conditions in Trinidad, obtained through an interview with Mr. T. Geddes Grant, of Port of Spain, who has been active in extending trade between Canada and the island. The interview with Mr. Grant was published in the Maritime Merchant, from which it is taken. Mr. Grant said:

Canadian flour has had rather an unfortunate experience in Trinidad. Last year the total imports of this commodity into the colony amounted to 168,380 barrels, of which the United States supplied 164,088 barrels

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and Canada only 3,834. The imports of Canadian flour have decreased steadily for four years. In1901 they amounted to 15,689 barrels, in 1902 to 12,478, in 1903 to 5,264, and in 1904 to 3,834, as already mentioned. For some cause or other brands of flour that have been kept in storage for a long time in a place like St. Johns, Newfoundland, and turned out well in the end have spoiled when sent to Trinidad much more quickly than American flours. The people very quickly turn against an article that is uncertain in quality, and a brand that has failed in this way once can not maintain its hold.

The butter trade is growing in the sense pointed out in Messrs. Smith & Proctor's letter published recently in the Merchant. Canada can not compete with the cheap French butter used so extensively by the poor people, but concerns catering to the best class of trade have no difficulty in gaining and holding business. Good Canadian butter shipped in air-tight packages will secure a satisfactory market in the West Indies, but shippers should always observe the rule of air-tight packages.

Cordage is a line in which Canadian producers are doing very well. The imports of cordage and twine last year exceeded $8,000, of which $1,259 came from the United States, $2,702 from Canada, and $3,892 from Great Britain, and of the latter twine would make up the largest portion.

BANKING FACILITIES HELPFUL.

Oats have been gaining ground rapidly. In 1901 the imports from Canada were 37,824 bushels, in 1902 104,668 bushels, in 1903 194,236 bushels, in 1904 159,602 bushels. The falling off last year was not due to any dissatisfaction, but to the fact that the Canadian price was high, owing to the scarcity. Mr. Tripp rightly draws attention to a practice resorted to in the United States of shipping inferior oats to Trinidad in bags so marked as to give the impression that they are a Canadian article, a thing which Canadian shippers should have rectified in their own interests.

And so in many departments every day Trinidadians seem more disposed to take up with goods of Canadian production. But it is a matter of the right price and suiting the consumer to get the trade. Wherever Canada is doing this she is securing the business. Mr. Grant's own experience in extending trade in such goods is confirmatory. There is another factor to which Mr. Grant gives large credit, namely, the banking facilities afforded by the Union Bank, of Halifax. These, Mr. Grant says, are very helpful in establishing the Canadian-Trinidadian trade.

The Royal Mail has transferred its headquarters in the West Indies from Barbados to Port of Spain, with very beneficial results to Trinidad. Barbadians estimated that it meant $50,000 a year to their colony to have the steamers make headquarters there, as a result of tourists going ashore who were destined to other points. This benefit Trinidad will now reap. It will be a further benefit to the colony because of the better communication now afforded, so that business men can carry on their operations between the islands more satisfactorily and successfully. The Royal Mail has also put on a New York service, and the establishment of this high-class line on that route will have the tendency to still further facilitate and encourage commercial interests with the United States, so that watchfulness on the part of Canada over her trade interests in the West Indies is all the more urgent.

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INCREASE IN RECIPROCAL TRADE.

A volume of statistics of Trinidad for 1902–04 has the following reference to trade between Trinidad and Canada. An appreciable increase is recorded in the imports from and the exports to Canada as compared with 1900, and the improvement is attributed to some or all of the following: Visits to Trinidad of officials representing the Canadian government; visit of representative of the Canadian Manufacturers' Association; visits of prominent Canadian merchants desirous of opening up trade relations with the colony; the transfer of Port of Spain electric light and tramways to a Canadian company; the establishment of a Trinidad branch of the Union Bank of Halifax; the establishment of an improved steamer service between Canada and Trinidad; the exploration of mineral oil by a Canadian syndicate.

Of the imports, flour comes chiefly from the United States and only a small proportion from Canada. Potatoes come from Canada and Portugal. Up to 1902 oats were supplied almost entirely by the United States and only a small quantity by Canada, but since then Canada has completely reversed the position. Table butter comes chiefly from Denmark, Canada, and France. Canadian imports of preserved meats have largely increased during three years. In fish, Canada supplies the main portion. Shingles come chiefly from Canada, but Canadian furniture is little known. Canadian firms have recently begun to introduce leather goods. The United States has doubled its exports of soaps in the three years under review.

BARBADOS.

FLOUR AND OTHER FOODSTUFFS.

In response to numerous inquiries, Consul Clare, of Barbados, furnishes the following list of names of the largest and most important handlers of flour in that city, who represent the principal importers of that article: Da Costa & Co., W. L. Johnson & Co. (Limited), J. R. Bancroft & Co., Alleyne, Arthur & Co., J. W. Croney, Barnes & Co., Gittens, Croney & Co., A. W. Cheesman, J. R. Fields & Co., John Mayers, and A. A. Cole.

The consul in forwarding the list writes:

Da Costa & Co. import their flour and other foodstuffs from L. W. & P. Armstrong, of New York. The other importers buy principally through A. D. Straus & Co., E. F. Darrell & Co., G. F. Lough & Co., and Arkell & Douglas, all of New York. Hecker-Jones-Jewell Milling Company sell a great deal of flour in the West Indies, but do not invoice direct. Their representative makes the sales, but the orders are sent to the New York correspondent of the importer who purchases the flour from Hecker and invoices it to the importer in the West Indies.

The total imports of flour for the year 1904 were 67,347 barrels, amounting to $290,941. Of this amount the United States furnished 63,707 barrrels of the value of $275,217; Canada, 2,792 barrels, valued at $12,061, and Great Britain 634 barrels, amounting to $2,739. The remaining 214 barrels came from British Guiana and the British West Indies.

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CENTRAL AMERICA.

GUATEMALA.

AN UNSATISFACTORY YEAR—PRESENCE OF GERMAN CAPITAL.

Consul-General Guenther, of Frankfort, furnishes the following paragraph based on a report made by the Austro-Hungarian consul-general in Guatemala:

German capital has interested itself in Guatemala for many years, and the new Bank for Central America, founded by the German Bank, one of the largest banking institutions of Germany, will commence operation with the establishment of a branch office in the city of Guatemala. Under these circumstances a report made by the Austro-Hungarian consul-general in Guatemala to his Government deserves attention. He states: "The year 1904 has been rather satisfactory from an economic view. While it is true that the import trade is very depressed and while exports have not met expectations, the cause for this is to be found less in Guatemala, but rather in the still existing low prices of coffee in the markets of the world. As long as this article, which is the chief article of export of Guatemala, does not command better prices, the business conditions of Guatemala will not be as satisfactory as the natural resources of the country should justify. At the end of the year 1904 there occurred, furthermore, a very much felt lack of corn, owing to two successive crop failures. As corn is the chief nutriment for the masses of the people, its enhanced price has affected the business interests of the country very materially. The sales of imported articles have been greatly impaired by it. As long as this shortage of corn lasts the import trade will suffer severely and will only assume its regular proportion when prices of corn have again become normal."

COSTA RICA.

DUTY IMPOSED ON SAMPLES.

In reply to inquiries Consul Demers, of Port Limon, writes that the regular customs duties of Costa Rica are levied on a traveling man's samples, but refunded to him upon leaving the country if he takes the samples with him. A wharfage of 3 centavos per kilo is also levied. This is equivalent, in United States currency, to six-tenths of 1 cent per pound, and is not refunded. All the important points or towns in the country are easily accessible by railroad. San José, the capital and commercial center, is situated 103 miles from Port Limon, and reached in six hours. Spanish and English, in the commercial world of Costa Rica, are spoken in the proportion of probably 60 to 40. Naturally, the traveler speaking the two languages will have the advantage, but it is possible for an active man speaking English only to do a fair amount of business. English is almost exclusively spoken in my consular district.

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COTTON.

EFFORTS FOR CULTIVATION.

PROGRESS REPORTED IN BRITISH COLONIES.

REPORT OF BRITISH COTTON-GROWING ASSOCIATION—RESULTS OBTAINED IN VARIOUS COUNTRIES.

The British Cotton-Growing Association is an organization of British cotton manufacturers and others interested in the cotton industry, whose principal object is to promote the cultivation of the staple by encouraging its growth in the British colonies and in other countries in which conditions of climate and soil are favorable. The association was formed about two years ago, and its efforts have been followed by varying results which, upon the whole, are regarded as encouraging if not entirely successful. In June last an international convention of spinners and manufacturers was held at Manchester, England, which was largely attended by European representatives, and at which the promotion of cotton cultivation was fully discussed. Subsequently an exposition was held at London at which samples of cotton grown in the East and West Indies and other places, together with fabrics manufactured therefrom, were exhibited. This movement is being earnestly pushed in Great Britain and on the Continent and its progress is naturally watched with interest in this country.

LARGE PRODUCTION LOOKED FOR.

The first annual report of the Cotton Growing Association for the year ending August 30, 1905, has been recently issued, and is receiving attention from British newspapers, from which the following synopsis is taken:

The report of the council states that shares to the value of £198,432 were subscribed to date. While confessing disappointment that there has not been a larger response in subscribers to the capital of the association, yet it was recognized that for the two years prior to its issue the cotton trade and those depending upon it had been suffering from exceptional loss and disturbance through short supplies of cotton and the market manipulations by unscrupulous speculators. But the council now hopes that there will be a large response from the whole of the trade, and they have little doubt that if the spinners, manufacturers, and operatives will bring the funds up to £300,000 there will be little difficulty in raising the other £200,000 from allied trades and elsewhere. By means of the association's expenditure a large

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amount of cotton has already been produced, varying in quality from the finest sea island downward. In addition a great amount of interest and enthusiasm has been aroused throughout the whole Empire. There are also as a result of this expenditure many thousands of acres of land now under cultivation, from which the council confidently hopes that during the next season there will be produced by themselves and other planters at least 25,000 bales of a value of £250,000. The full result of this expenditure will not, however, be obtained this season or next, for the movement which has now been started will automatically continue to grow.

DEVELOPMENT ON COMMERCIAL LINES.

Taking everything into consideration, the council is of opinion that the shareholders have every reason to congratulate themselves on the excellent results so far achieved, and there is not the slightest doubt that with time and money both larger and better results can be obtained, and judging by the experience of the work of the last twelve months they are more convinced than ever that the British Empire can produce cotton of sufficient quantity and of suitable quality for the needs of Lancashire. While, so far as is compatible with the capital available, no possible source of cotton supply is being neglected—apart from all questions of immediate profit or loss—at the same time the work is being developed on "commercial" lines as fully as circumstances will permit. The obvious advantage of this policy is that it will not only provide funds for further extensions, but will also enable the council to build up a business which will ultimately be remunerative to the shareholders, and so insure the permanence of the arrangements now in course of organization for bringing the spinners of this country and the cotton cultivators in British colonies into the closest possible touch to their mutual advantage. The council has every confidence that with ample capital in a few years' time a profit may be earned on the money which is now being laid out in various parts of the British Empire, and that the shareholders may look forward to a return on the capital which they have subscribed.

POSSIBILITIES OF THE ENTERPRISE.

Commenting on the report of the association the Newcastle Chronicle of November 17 says:

"In the report of the council of the British Cotton Growing Association, which has just been issued, we have an impressive record of the progress made. This is the first annual report issued since the incorporation of the association under royal charter, and while the council confesses to some disappointment owing to subscriptions to capital not having reached the sum anticipated, the work done is most encouraging. The report gives details as to what has been done in various parts of the British Empire. In the West Indies, from which quarter we formerly received considerable supplies of cotton, the experiments give promise of excellent results. The goods manufactured from West India cotton are stated to be most satisfactory in appearance and in quality. The reintroduction of cotton cultivation will ultimately be of great advantage to planters, as it will make them less dependent on the production of sugar. In the fact that attempts to reintroduce

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the culture of cotton in the West Indies were postponed until quite recently we have a proof of the influence of custom in commerce. The results of the experiments made in West Africa are most encouraging. The total area of our West African possessions is about 500,000 square miles, and we are told that that area will not compare unfavorably with the cotton States of North America. In two or three years it is anticipated we shall be getting large quantities of cotton from West Africa, which will be quite superior to what is known as "middling" American. In addition to the experiments made with different varieties of cotton seed attempts are being made to raise maize and other products as between crops. From what has been done it seems quite possible that in a very short period the enterprises of the British Cotton Growing Association may revolutionize one of the principal trades of the world."

OPERATIONS IN VARIOUS COUNTRIES.

Monsieur M. C. Berger, vice-president of the Cotton Association of France, was a delegate to the Manchester convention, and delivered an address which is having large circulation in France and other European countries. That portion of Monsieur Berger's address describing the progress made in extending the cultivation of cotton is especially interesting. Consul Murphy, of Bordeaux, forwards a copy of the address from which the following is taken:

This question of cotton cultivation has become a universal one. Cotton is the most democratic of textiles and the most necessary for all, rich and poor. It is necessary for the Government of each country to lend financial aid to colonial cotton associations and in other ways favor those engaged in the cultivation of cotton. What will happen, when each country shall produce in its own colonies enough cotton to supply a large part of its spindles? We may then expect surprises from the Americans, and the Old World will be obliged to take protective measures against the invasion of products from the New. Permit me now to lay before you the actual facts of the situation in each of the colonial cotton associations.

Russia, the first nation to think of developing cotton culture in the Province of Turkestan, has, after fourteen years, succeeded in producing a sufficient quantity for a third of her consumption, and her output will be greatly increased.

Belgium possesses an immense field for experiment in her Congo Colony in Africa. She has five times more territory there than France has. She is now making experiments all over her vast territory, but will localize her cotton growing in the territory to the southwest near the sea and north of the Portuguese possessions of Angola, thus cheapening transportation. The Congo cotton plantations are managed by Americans from Texas. American seed has succeeded wonderfully well and the cotton grown is satisfactory both in quality and quantity.

Italy has made no efforts in cotton growing except in Erythrea, Egypt. What is grown there, however, is of good quality, though its cultivation has hardly passed the experimental stage.

The old abandoned fields on the Balearic Islands have recently been worked, and the Spanish Government is furthering the movement, offering to the growers immunity from all taxation and prizes in money.

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PORTUGAL AND GERMANY.

In Portugal the Government organized a commission in August, 1904, to study and propose means for cotton cultivation. The work of the commission ended in March, 1905, when it presented to the minister for the colonies a full report covering the history of cotton growing in the Portuguese colonies, proposing a law which the minister accepted and presented to Parliament. It is proposed to exempt all growers from taxation, to admit machinery free of duty, and to afford reduced rates of transportation. The importation of Angola cotton in 1900 amounted to 17,000 kilograms, in 1904 to 107,000 kilograms, and this year a much larger production is promised. The cotton grown there is superior to what is known as "good, middling American." In the Province of Angola, as in Mozambique, there is enough land to produce cotton sufficient for the world's consumption, and the conditions of cultivation are most favorable.

The German association known as the "Kolonial Wirtschaftliches Komitee" commenced with a capital of 937,000 francs and received annually from the Government 75,000 francs, which amount is to be largely increased. The production of cotton in the African colonies is progressing favorably, and the quality is satisfactory.

ENGLAND AND FRANCE.

The value of the cotton crop of 1904 in the British colonies we may estimate at 100,000 francs, and the present season at 250,000 francs. The opinion in England seems to be that her colonies could produce great quantities of cotton which could easily find a market, as America can never have more than 35,000,000 acres for cotton-growing purposes, and there is an increasing demand annually of about 400,000 bales.

In regard to France, in 1903 we particularly directed our efforts to the Sudan, Dahomey, Madagascar, and Algeria. In the Sudan we conducted our efforts in the region of Ségou on the River Niger. In May, 1904, 5 tons of American seed were distributed principally in the vicinity of Ségou, but the crop was poor because of the dry season. Native seed, that had been sown two years ago, resisted the heat because of their deeper roots, while it was noticed that American seed, sown in the same year, resisted better than the native.

In Dahomey seed was distributed, but it is too early to prognosticate. In Madagascar, experiments made, in 1903, with different varieties of seed, demonstrated that the great island could furnish cotton in abundance, principally upon the west coast. The cotton grown was remarkable for length of fiber and fineness. Distributions of seed will be made to the planters on the southern coast and in the province of Betsiléo.

In Algeria 200 kilograms of Egyptian seed were distributed by the Colonial Association to the planters on the plains of Sig, de Perregaux and de Pelizane. The different cottons obtained were of remarkable quality and much appreciated in the markets of Havre. Mr. Berger concluded his address as follows:

The French Government is lending its aid to the development of cotton culture in its different colonies and is constructing ways of communication which will permit, in two or three years, the bringing of cotton to our French ports at the same prices it costs to bring it from New Orleans or Galveston.

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OPTIMISTIC VIEW.

PERSISTENT EFFORTS IN TWO HEMISPHERES.

According to the German consul-general in Calcutta, published in Nachrichten für Handel und Industrie, India expects to harvest a large cotton crop. The people of the cotton-growing sections of India are satisfied that there is money in cotton, hence are constantly increasing the acreage and the methods of culture and care. The increase of acreage this year is fully 8 per cent. That part of India known as the United Provinces have 4,500,000 acres under cotton now. Because of the late appearance of the monsoon the sowing was late; still, the outlook is exceedingly encouraging.

For some time Argentina has been striving to grow cotton. The pressure of low prices was disastrous to many parts of the country, but did not succeed in dissuading the people to put cotton planting entirely aside. The cheapness of the land has favored cotton growing; only freight and wages have worked against success. With time, both of these, it is believed, will be overcome. If the Chinese are admitted into Argentina to work on the plantations it is easy to see that the problem of labor will be easily solved. No workers in the Tropics excel the Chinese. They have demonstrated their willingness to work, their ability to live in the hottest parts of the world, and their capacity to convert swamps and desert places into gardens. Once the cotton growing of the warm parts of the world passes into the hands of the Chinese, a long step toward increasing the supply and toward securing tropical cotton crops will be taken.

The fruitful province of Asiatic Russia, whose capital is Samarcand, increased its cotton acreage by 88.6 per cent during 1904–5. The amount under cotton cultivation is not particularly large, being 49,960 acres, still it indicates a tendency on the part of all people who can cultivate cotton to increase their acreage. Because of bad weather the yield was 22.4 per cent less than a normal crop. The yield was 38,909,882 pounds, 11,223,754 pounds less than what was expected, and would have been picked had the weather been favorable.

THE CROP OF INDIA.

INCREASE IN ACREAGE AND OUTPUT.

The following information of the cotton crop in India is from the "Second general memorandum on the India cotton crop of the season 1905–6" by the director of commercial intelligence, and is furnished by Consul-General Patterson, of Calcutta:

The memorandum relates to the whole of the early crop and so much of the late crop as has been sown up to the end of September. Provinces representing 87.5 per cent of the total cotton crop of British India report an increase from 8,957,000 acres to 10,339,000 acres, or an average increase of 18 per cent, the marked increase being in Bombay and Madras. Other provinces, representing in all 12.2 per cent of the total crop, report an aggregate contraction of 135,000 acres, or 9 per cent, the noticeable decrease being in the united provinces and the north-

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west frontier provinces. The net result in respect to all the British provinces is an increase of about 1,246,000 acres or 12 per cent. As regards the native States, Hyderabad shows an increase of 84,000 acres, or 3 per cent, and the Bombay States, including Bareda, an increase of 42,600 acres, or 30 per cent. The October forecasts have not yet been received from central India and most of the Rajputana States. Taking for these States the figures as reported in August returns, the total area in all of the native States is now a little over 5,500,000 acres. Except in the Punjab and the united provinces, where unirrigated cotton has suffered badly from want of rain, the present condition of the crop is good and the prospects are generally favorable. However, more rain is required in certain areas, particularly in Bombay.

EGYPT'S CROP.

INCREASED DEMAND IN GERMANY.

Consul Brittain, of Kehl, writes that Egyptian cotton, its demand and consumption by the manufacturers in Alsace, Germany, formed a chapter in the annual report of the Chamber of Commerce of Mühlhausen, Alsace, Germany, according to which the annual importation of this Egyptian (mako) cotton amounts to 48,000 to 50,000 bales, having an average weight of 300 to 350 kilograms (661.38 to 705.47 pounds). This amount is about one-fourth to one-third of the average total consumption of cotton in upper Alsace. Mako cotton is especially used for the spinning of very fine textiles, as it is claimed to be best suited for the spinning of fine yarns. The demand for Egyptian cotton has lately increased in the Alsatian factories on account of the greater demand for mercerized cotton textiles, for, with special machinery, cotton goods can now be made to appear as silk goods, and Egyptian cotton is most suitable for this purpose.

An exact comparison of the various cottons as regards prices can not well be given, as conditions pertaining to crops, markets, and speculation may control these. In general it can be said that under like conditions the Egyptian cotton is 15 per cent dearer than the American. India cotton is also of less value than the Egyptian mako. At present time good India cotton is 15 pfennigs (3.57 cents) cheaper per pound than good American, and good American cotton 15 pfennigs (3.57 cents) cheaper per pound than Egyptian. Egyptian cotton is received in Alsace-Lorraine through the ports of Genoa, Trieste, and Marseille. It has also been tried recently to receive the cotton shipments through the port of Dunkirk, France.

SOUTH AFRICA.

RESULTS OF EXPERIMENTS.

Consul-General Washington, of Cape Town, reports that Mr. Allister M. Miller, manager in South Africa to the Swazieland Corporation, in the course of a report to his directors on the principal events affecting the corporation and Swazieland during the year ending June 30 last, mentions the result of an experiment in cotton growing. Mr. Miller says:

"Under instructions from the board, we established a small experimental cotton plantation on a portion of our land in the middle veld.

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Four varieties of cotton were planted: Egyptian, Brazilian, Sea Island, and Upland Big Ball. The seed of the latter arrived late; consequently the plants suffered in the severe hurricane of June 1, blossomed in the early winter, and the test was not a fair one. Both the Egyptian and the Brazilian varieties grew well. The average number of bolls per tree was 40, but in quality and size the Brazilian was the better of the two. Cotton seed was distributed generally throughout the country by the British Cotton Growers' Association and the Transvaal Agricultural Department, and I have had an opportunity of inspecting a number of planted areas, which, however, were of too small a size to enable one to form any opinion as to the economic possibilities of the product. But the year's growth in various parts of Swazieland proves that the climate and soil are congenial and that the plant will do well in most parts of the country, and once cheap transport is available there will be every encouragement for the establishment of a cotton plantation on a commercial scale."

TEXAS TO NORWAY.

DIRECT SHIPMENT OF COTTON-SEED MEAL.

Consul B. M. Rasmusen, of Stavanger, reports the arrival of a cargo of cotton-seed meal direct from Galveston, which is the first direct shipment from the United States to the Norwegian port named. The consul says:

It gives me pleasure to report that a cargo of cotton-seed meal has just arrived here from Galveston, Tex., which is the first direct shipload from the United States to Stavanger. It was only through persistent efforts on the part of the importer, with such assistance as this consulate was able to render him, that this has been accomplished. The lack of direct transportation facilities and the high freight rates between this port and the United States was brought to my attention two years ago, and I suggested to the importers at that time that a cargo could undoubtedly be delivered here at a much lower rate than that exacted by the importing syndicates if one of the numerous steamers owned in Norway and employed in the fruit-carrying trade of the United States could be chartered when returning home instead of sailing in ballast, as they frequently do. Accordingly this was done, but the project was blocked at every turn by the importing syndicates at Hamburg and elsewhere. I may add that it was only after paying a commission on this cargo to the syndicate that direct shipment was permitted.

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BEET SUGAR.

OUTPUT IN EUROPE.

LARGE INCREASE IN CROPS ESTIMATED.

PRODUCTION IN VARIOUS COUNTRIES—REDUCED CONSUMPTION.

According to the following report on the production of beet sugar in Europe, Consul Diederich, of Bremen, thinks that this year's output is to surpass all hitherto recorded except 1901–2. The crop of beets will be far beyond that of last year in quantity, though the quality will be lower. The consul writes:

The great interest as to Europe's sugar-beet crop in 1905 is shown in many reviews now being published on the subject. The beets are being harvested everywhere and hauled to the factories, where the work of slicing them has begun. The cool and wet weather of the past weeks was not of a kind to improve the quality or the ripening of the beets; but while the crop lacks in quality it abounds in quantity. Last year 17 tons of beets were harvested per acre, whereas an average of about 23 tons is expected this year. From all accounts it will also be found that the individual beets are much larger than last year and that their average weight will exceed former figures, but their sugar content will not run very high, being only 15 per cent, against 16.01 per cent in 1904 and 15.46 per cent in 1903. However, large beets or roots of fair polarization always give better results than a high polarizing beet of small size. So while some of the sanguine estimates already put forward as to the outcome of the sugar crop of this year may not be realized, it is safe to say that all previous records of beet-sugar production in Europe will be surpassed, with the exception possibly of the year 1901–2, when it reached 6,722,051 tons. At any rate, there will be more sugar produced than can be used by consumers, and the final stocks at the end of the year, on September 1, 1906, will again be far over 1,000,000 tons. Naturally all estimates of the new crop at this writing (October 24) can only be preliminary and approximate. The following table will show such estimates, as made by Messrs. Otto Licht and Gieseker, the German and Belgian experts, and by the "Zentralblatt," of Magdeburg.

PRELIMINARY ESTIMATES.

Preliminary estimates just published by the International Union for Sugar Statistics, comprising all the sugar factories in Germany,

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France, and other countries, put the results approximately as follows:

Country.	Beets (1905–6).	Sugar (1905–6).
	Tons.	*Tons.*
Germany	14,760,500	2,114,900
Austria-Hungary	9,014,000	1,325,000
France	7,977,800	970,200
Belgium	2,375,000	316,800
Holland	1,370,000	189,100
Russia	7,745,690	1,007,100
Sweden	827,200	117,700
Denmark	510,000	63,750

These figures show a great advance over former years, ranging from 20 to 98 per cent as to the amount of beets and from 8 to 85 per cent as to quantity of sugar.

TOTAL VISIBLE SUPPLY.

As to the cane-sugar crops now growing in Cuba and other countries, they also give promise of a material increase over last year. According to the best information, we may look for about 5,200,000 tons of cane sugar. Therefore, taking these estimates, which are the most conservative, as a basis, we may consider the question of supply and demand for the coming year, or campaign, by noting the facts and figures in the following instructive table. The visible supply is that in sight September 1.

Description.	1905–6.	1904–5.	1903–4.	1902–3.	1901–2.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Visible supply	1,661,000	1,969,000	2,353,000	2,239,000	1,221,000
Beet	6,400,000	4,700,000	5,859,000	5,572,000	6,722,000
Cane	5,200,000	4,629,000	4,584,000	4,297,000	4,109,000
Total	13,261,000	11,298,000	12,796,000	12,108,000	12,052,000
Surplus		1,661,000	1,969,000	2,353,000	2,239,000
Consumption		9,637,000	10,827,000	9,755,000	9,813,000

The consumption of sugar during the past campaign, ended August 31, was the smallest in many years. How to account for this is an open question. It is claimed by some that the Brussels convention, which abolished the bounties, made sugar dearer than it otherwise would have been and checked consumption. This, in my opinion, is erroneous. The bounties had stimulated the European sugar industry to such a degree that, in 1901, it produced fully two-thirds of the world's supply of sugar. Had the bounties continued this condition of affairs would have been greatly aggravated and the world would have become still more dependent on the European beet crop for its sugar. That we are still greatly dependent is seen from the fact that when a year ago it was found that there would be 1,000,000 tons less of beet sugar a wild speculation developed and prices rose out of bounds, causing a large decrease in consumption; and when this year it became known that there would be another bumper crop the market collapsed, and very low prices now prevail. The very object of the

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Brussels convention is not to stimulate speculation, but to prevent these fluctuations in the market and to bring about a condition of things that will determine the price of sugar by its cost of production and by nothing else. This final result will be attained, but the process requires time.

REDUCED CONSUMPTION.

Another interesting item connected with the beet-sugar question is furnished by Consul Harris, of Mannheim. He calls attention to the reduced consumption in Europe, giving figures for the years 1903, 1904, and 1905. He writes:

The consumption of sugar in the countries adhering to the Brussels Sugar Convention for the years ending June 30, 1905 and 1904, are given as follows:

Country.	1904–5.	1903–4.	Decrease.
	Tons.	*Tons.*	*Tons.*
France	542,314	699,030	157,716
Germany	968,856	1,018,673	58,817
Austria-Hungary	445,016	503,962	58,946
Belgium	67,676	85,431	17,755
United Kingdom	1,533,773	1,566,869	33,096
Holland	90,173	88,355	[a] 1,818
Total	3,641,808	3,962,320	[b] 320,512

[a] Increase. [b] Decrease.

The year 1903–4 showed a gain in the countries named of 781,999 tons over the year 1902–3, or 24.5 per cent, while the year 1904–5 showed a gain of 461,487 tons over that of 1902–3, or a gain of 14.5 per cent.

AUSTRALIA.

GROWTH OF BEETS ENCOURAGED.

PROPOSITION TO AMEND THE BOUNTY ACT—WHITE AND COLORED LABOR.

Consul-General Bray, of Melbourne, reports that a bill is being prepared by the prime minister of Australia for presentation to Parliament, having for its object amendment of the existing bounty act. The consul-general writes:

At present there is an import duty of £6 ($29.19) per ton on sugar, and an excise rate of £3 ($14.59). To encourage the production of Australian-grown sugar by white labor, a bounty of £2 ($9.73) per ton is granted on all sugar grown by white labor, or, in other words, a rebate of $9.73 per ton on the excise rate is allowed. The ministry and a majority in Parliament are in favor of the extension of the bounty system, and desire to substitute white for colored labor. In order to do this, Parliament will be asked to increase the excise rate on sugar to £4 ($19.46) per ton and the bounty on sugar grown by

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white labor to £3 ($14.59) per ton, by which means that grower will be given an additional £1 ($4.86) per ton bounty, while the protection accorded to the sugar grown by colored labor against the imported sugar (of which 38,035 tons valued at $2,020,181 were imported into the Commonwealth during 1904) will be reduced by £1 ($4.86). The white planter will by this means still have a protection of £5 ($24.33) per ton against the imported sugar and gain an extra £1 ($4.86) on every ton he produces, while the protection to the product of colored labor will be reduced from £3 ($14.59) to £2 ($9.73) per ton.

CLAIMS FOR BOUNTY.

The following table shows the acres registered for bonus and number of white cane growers in the State of Queensland, in which the industry is located:

District.	1902.		1905.	
	Number of growers.	Number of acres.	Number of growers.	Number of acres.
North	36	1,882	124	5,024
Central	519	12,333	977	28,522
Southern	617	17,814	937	30,471
Extreme south	249	4,509	643	8,589
Total	1,421	36,538	2,681	72,606

In a report to the Commonwealth Government, Doctor Maxwell, the sugar expert to the government of Queensland, remarks:

"The actual position is that after four years' operation of the bonus approximately one-third of the sugar crop of Queensland is produced by white labor. In connection with this summary result it has to be repeated that the progress has taken place almost wholly within the southern and central districts, which are the districts of densest settlement and of the more temperate climatic conditions. At this time there still remain areas which furnish two-thirds of the total sugar crop of Queensland and which are awaiting conversion from colored to white conditions of production. These remaining black sugar areas are occupied by farmers in the northern districts and by plantation owners in the southern or district of Bundaberg, and are in the hands of 750 large growers. The present schedule of bonus was based upon the cost of labor and upon other considerations existing when the legislation was enacted. With the progress of white production white labor must continue to command a higher compensation in the form of wage and of better domestic provision for workmen. The existing measure of bonus must therefore tend to fall below, and not to exceed, the cost of substituting white for colored labor.

A QUESTION OF RACE.

"It is the possibility of failure of the present measure of bonus to meet the differences in cost between colored and white labor which is in part confirming the larger employers of wage-earning labor in holding to the use of aliens. If the excise rate and bounty are increased, many planters in the southern and central districts will be tempted to

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employ none but white labor, but in the northern district the situation is otherwise. In that district settlement is sparse, and so far has not been increased by the provisions in favor of white sugar production. Neither white people prepared to settle upon the land, nor white labor ready to work at the higher rate that the bonus would provide are on the ground in the same proportionate state of readiness that obtains in the southern district. The north, it is foreseen, would have to grow sugar for some further period under the lowered protection that would follow an increase of excise, or that district would have to suspend production. Concerning the supply of the existing types of labor, it is indicated that such a supply may continue to be obtained in the north. According to the latest official returns there are in the northern district, in addition to 2,807 Kanakas, 3,917 other aliens engaged in the sugar industry. If the conceived increase of excise should induce or force white production to take the place of the remaining colored production in the southern and central districts a very considerable number of colored laborers not liable to deportation would be released and made available for use in the north. The number of aliens other than Kanakas in Queensland is 14,505."

CANADA.

LARGE AND PROFITABLE YIELD.

Consul Ifft, of Chatham, Ontario, makes the following report on the growth of sugar beets in the peninsula of Ontario:

The farmers of the peninsula of Ontario will receive more than $600,000 for their sugar-beet crop this fall. This represents the price paid the farmers for this year's crop, which totals about 155,000 tons—the product of about 15,000 acres planted in beets last spring. This shows an average yield of more than 10 tons to the acre, and so profitable has the crop been that the acreage will undoubtedly be greatly increased next year. In some favored sections the yield has run from 15 to 20 tons per acre, and while the beets are on the whole smaller than the average they test as high as from 14 to 17 per cent. The product of about 2,000 acres of this crop, and some of the very best of it, has been bought by the American beet-sugar manufacturers and the beets are now being shipped to the factory at Marine City, Mich., as fast as they can be loaded. In all about 30,000 tons of sugar beets will be sent to the United States from the peninsula of Ontario this fall. Buyers for the American manufacturers are paying $4 per ton for the beets on the river banks or at the railway stations; delivered at the factory on the American side they cost about $5.25 made up of the original $4, the 25 per cent duty, and the transportation charges.

The balance of the Ontario crop, about 130,000 tons, is being sent to the factories at Wallaceburg and Berlin, the only beet-sugar plants in operation in Canada this year. Two other factories in Ontario were abandoned last year mainly because of unfortunate locations. The factory at Dresden was moved to Janesville, Wis., and the factory at Wiarton was closed through litigation and is idle.

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A new beet-sugar factory is now in course of erection at Whitby, on Lake Ontario, but will not be ready for this season. Next season will probably see other plants located on the Canadian side, although the American manufacturers in Michigan are making a vigorous fight for a reduction in the duty on Canadian beets.

ENGLAND.

SUCCESSFUL CULTIVATION OF BEETS.

Consul Mahin, of Nottingham, makes the following report on a movement in England to cultivate beets and manufacture sugar:

For several years the feasibility of manufacturing beet sugar in this country has been discussed, and experiments in cultivating the beet have been made. It now seems indubitable that sugar production is actually to be undertaken, for the site of the first English beet-sugar factory has been secured. It is located at Owston Ferry, in Lincolnshire, on the banks of the river Trent, which, being navigable, will give the enterprise a very convenient means of transit. The soil thereabouts is said to be peculiarly well adapted to beet culture. On the 3,000 acres understood to be available, a correspondent of a local newspaper avers that 60,000 tons of sugar beets can be raised, though this (20 tons to the acre) seems an extravagant estimate, since in the most important experiments hitherto made in this country the yield has averaged about 16 tons. The Lincolnshire tract, however, is claimed to be marvelously fertile in root products.

It is estimated that the yield of 60,000 tons would bring the growers about $220,000—more than double the result from a sowing of wheat on the same soil. The 60,000 tons of beets, it is further estimated, would yield 8,000 tons of sugar, which, with various by-products, would sell for about $440,000. Deducting from this all expenses of every character, a fixed dividend of 8 per cent on the shares of stock is figured out, still leaving a substantial sum to be distributed among growers and employees on the cooperative principle and a further sum to go to the reserve fund.

As related in previous reports from this consulate, the announced results of experimental sugar-beet culture in England show a larger percentage of sugar than that in German beets.

If all these calculations be realized England can in time be wholly independent in respect to beet sugar.

Consul Ledoux, of Prague, Austria, writes that the firms below named desire to communicate with American exporters of the following articles: Baby and doll carriages, gocarts, expresses, wagons, etc., Hirsch & Co., manufacturer and wholesaler, Teplitz, Bohemia. Paper, writing, Gottlich Hermann, commission agent, Weinberge bei Prague, Rubesgasse, 1, Bohemia.

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TARIFF.

CANADIAN COMMISSION.

CONTINUATION OF THE INVESTIGATION.

THE SESSIONS HELD AT SEVERAL POINTS—CONFLICT OF OPINION.

Consul Ifft, of Chatham, Ontario, makes the following interesting report on some of the hearings that were held before the tariff commission in his vicinity, from which it appears that the agriculturists are very generally opposed to any increase in existing rates of duty on manufactured products, and that there is considerable sentiment among this class for reciprocity with the United States. The consul writes:

The demands of the Canadian manufacturers for higher protective duties, which marked the resumption of the Canadian tariff commission's hearings at Montreal and Toronto during the early part of November, have brought forth an altogether unexpected protest from the farmers of the Province of Ontario. This protest against higher protection, or any protection, is almost universal so far as the agricultural interests are concerned, the tobacco growers being almost the only exception, and has been presented in remarkably able manner. It was first heard at the closing sessions of the hearings at Toronto, and has been the dominant note at every point where the commission has sat since leaving Toronto for its tour of the Province, especially at London, Hamilton, Windsor, and Chatham.

FARMERS WANT RECIPROCITY.

Nowhere has the demand for a reduction of tariff duties rather than for higher duties been more forcibly presented than at Chatham. The representatives of some half dozen farmers' associations of Kent and Lambton counties appeared before the commission, and by resolutions and oral arguments urged the lowering of duties all along the line and protested against rebates or bonuses for any commodities. They claimed that what they really desired was reciprocity with the United States, but recognizing that this was impossible they strongly urged a reduction on manufactured articles. The farmers of Ontario, they said, could compete openly with the world.

Referring to special products, they argued that the farmers in the bean section were now practically unanimous in favor of knocking off the duty on beans. With reference to duties on fruits and vegetables they expressed the same opinion. They wanted free corn, as they needed it for their stock, and above all, they wanted free agricultural implements, wire fencing, and binder twine. Here, as well as elsewhere, the representatives of the agricultural industries have argued that under present conditions it is impossible for the better farmers on the better farms to make much more than a fair living; that it is impossible for those less fortunately situated to make more than a bare one; that the tariff as it stands does little or nothing for them, while

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it imposes on them quite heavy burdens; that to make the tariff more protective would be to make it more burdensome without making it more helpful, and that what they need is lower duties, freer trade, and an extension of the market for farm produce.

AMERICAN FARM MACHINERY.

These protests are due in a large measure to the demands of the manufacturers of agricultural implements for higher duties, and an analysis of the arguments of the farmers in reply makes it clear that what they really want is reciprocity with the United States. They want the American agricultural implements, which are declared a third better and a third cheaper than similar implements of Canadian make. They want free wire fencing, free binder twine, and, more than that, they want the American markets for the Ontario farm products. Practically the only exceptions were the growers of tobacco and sugar beets, both of whom asked for protection; but in regard to the latter industry the commission was overwhelmed by the testimony of 2 dozen growers of sugar beets that it was the most profitable crop they could grow on their farms. Mr. Frank Shaw, of Chatham, claimed to have cleared $50 an acre on sugar beets. Mr. George H. Oke, of Alvinston, said he would net $2,500 on 50 acres this year. Mr. Isaac Skinner estimated his net profit at $884 on 24 acres, while Mr. W. J. Dawson laid claim to a crop of 16½ tons to the acre, which would net him $70, and so on down the list. It is worthy of note in this connection that about 30,000 tons of sugar beets grown in this district this year are being exported to the United States, most of them to the sugar factory at Marine City, Mich.

PROTECTION ASKED FOR STAVES.

James Innes, of the Sutherland Innes Cooperage Company, presented a signed petition by 48 cooperage men. Owing to there being no export duty from Canada, the manufacturers of the United States manufactured cheaper than they could do here. He urged a 10 per cent duty, equivalent to the United States duty placed on imported staves. There were 74 manufacturers, employing 5,000 men. The duty would increase the value of the farmers' lumber, while it would not raise the price of apple barrels.

W. H. Stevens appeared for the corn meal millers. Practically they had no protection, as the difference of freight rates to Windsor was equal to the duty of 25 per cent, and as a result the United States manufacturers competed keenly. His output was once 600 barrels, but was cut down to 300, while they did not run on the average of more than one-quarter the time. If they ran more regularly they would run more cheaply, and sales would be correspondingly low in price.

Caleb Williams appeared at the request of hundreds of householders, who, he said, are feeling the effects of American control of the fisheries. The Americans, after fishing out their own waters by ostensibly but not really complying with the laws, were getting hold of all the fish in the country and exporting them to the United States, whilst the people in this country had not a fish to eat. Formerly the price was reasonable, now it was prohibitory. He urged an export duty on fish. Bass, the sportsman's fish, could not be exported, but the poor man's fish was exported, and to-day he can not get any. Once the fishermen worked independently, but now the fish companies leased the grounds from the Ontario government and the fishermen had to work for them.

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PROTECTION OF SUGAR BEETS.

Consul Seyfert, of Stratford, reports that at the sessions of the commission, held at Berlin, at which point large sugar-beet factories are located, a demand was made for better protection to the beet-sugar industry. The consul writes:

The president of the Ontario Sugar Company, backed by 100 farmers who grow beets, was heard in a plea for better protection in the sugar industry. His argument presents a new aspect of facts not generally known before. He said: "All sugar but 17.8 per cent of the consumption in Canada is imported under British preference. The total consumption of sugar for the year ending June 30, 1904, was 390,544,660 pounds, valued at $7,562,168, and duty paid on the same $2,128,493.43, on an average of 0.5588 cent per pound, which is equivalent to an ad valorem duty of 28.8 per cent. The returns for the year ending June 30, 1905, show a total consumption of 346,752,598 pounds, valued at $8,561,176, on which the duty was $1,846,986.81, or an average duty of 0.5326 cent per pound, which is equivalent to an ad valorem duty of 21.5 per cent."

The hundred farmers who were present came from 18 different counties and represented 2,000 beet growers shipping beets to the Berlin factory. Their argument was that Canada had the soil and climate to produce every pound of sugar consumed in the Dominion if proper protection were afforded to the industry. They said: "The profits on growing sugar beets exceeded those of any other crop on the farm," ranging from $15 to $50 per acre. The wholesalers and consumers also had a delegation present, who told an interesting tale on the other side of the case. The wholesalers said they were unable to buy any cane sugar "from the refiners" under existing conditions because the selling list is controlled by the Grocers' Guild. They wanted sugar on the free list so as to break up the combine.

CLAIMS OF MANUFACTURERS FOR LOWER DUTIES.

Consul Culver, of London, furnishes the following report regarding the two days' session of the commission held in that city recently:

Many of the manufacturers who appeared before the tariff commission during its two days' session in this city complained of the inadequacy of the antidumping act of the Dominion. It was claimed by the carriage manufacturers that American vehicles of a cheap character were being dumped on the market—that is, sold here at a less figure than such goods were offered for in the United States—and yet in some way they evaded the penalties of the Canadian dumping act. They claimed that these cheap importations were a great injury to their business and asked for increased protection. The same or similar claims were made by the stove manufacturers, the enamel-ware manufacturers, and others.

The British preferential tariff of 33⅓ per cent off the general tariff was severely attacked by the machine-screw industry. They claimed that by reason of the preference the Birmingham manufacturers could undersell the home manufacturer and were therefore breaking down the industry here.

An energetic appeal was made by the fruit dealers for a general lowering of duties on American fruit, especially at seasons of the year

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when the American fruit would not be in competition with the Canadian. They went over a list of vegetables and fruits which come into market in the United States several weeks before the Canadian product is ripe. "We want to protect the Canadian fruit grower," they said, "but we want to prevent him from keeping the people from getting fruit at any time except when the Canadian product is on the market."

A matter of interest to the show people of the United States was presented by the Theater Managers' Association of Canada. They asked that lithographed matter, printing, and costumes of opera companies should come into the Dominion free of duty, pointing out that these articles are only in Canada for short temporary periods, that no firm in Canada can manufacture them, and that the big companies felt the duty so much that they made the theaters pay it.

COMPARISON OF WAGES IN EUROPE AND CANADA.

Consul Wakefield, of Orillia, made the following interesting report on the importation of enameled ware into the Dominion, and furnishes reasons presented to the tariff commission for increased duties:

Considerable quantities of enameled ware from Austria have recently been placed on sale here. The retailers assert that it is superior in finish and durability to the American product, while the price is no higher. Both American and Austrian are superior to and command a better price than the Canadian product. Enameled ware from Austria now on sale is splendidly finished in a great variety of patterns and colors. The manufacturers of enameled ware in Canada recently presented their case to the tariff commission, sitting at London, Ontario. The Toronto Globe gives the following concerning it:

The manufacturers of enameled ware presented a comprehensive case through Mr. A. E. Kemp, M. P., of the Kemp Manufacturing Company, Toronto. Mr. Kemp referred to the difficulties which the industry had faced in its early years in Canada, and said that it is with the greatest difficulty it can be now carried on so as to produce a return beyond the necessary expense. At no time were the difficulties confronting the industry so great as at the present time, to which the cost of experimenting and the loss of goods in such experiments and the constantly changing styles contribute. The cost of labor in this industry in Canada to-day is much more than four or five years ago. The cost of labor in the foreign country where enameled ware is produced is now less than it has been. In Germany and Austria the experimenting has been made in technical schools, relieving the manufacturer of this burden. Female labor is also employed there. Labor enters into the cost of the goods in Europe only to a small extent. In the pickling rooms women get $3 a week for more hours than men serve in Canada for $12. Riveting is done by women at $2.50, against $9 for men in Canada. Dippers, women, at $2 to $3.50 in Europe, are men in Canada at $9 to $12. Labeling, $2 in Europe; $6 in Canada. Burners in Europe, 5 to 7½ cents per hour; in Canada, 27½ to 30 cents. From 20 to 25 cents, it is estimated, is the cost of labor in Austria and Germany for every dollar in Canada.

Since the imposition of the German surtax the goods in Canada come almost entirely from Austria. The tariff calls for 35 per cent ad valorem duty. An agent who collects small orders until he has sufficient to make a shipment contracts for these goods in large quantities, passes entry on a value he himself dictates, and, in the absence of an expert familiar with the language, he brings in goods as "second quality"

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which are really first, so that the duty becomes infinitesimal. Much attention has been paid to these operations in New York by the revenue officers. In 1902 attention was called to them in Canada, but no action was taken. Mr. Kemp asked that, whatever the maximum ad valorem duty in the new tariff is, it be applied to the tariff on enameled ware, and that the law be enforced with respect to valuations. This and allied industries, he said, gave employment to 2,500 people in Canada, with wages of $1,000,000. The manufacturers make about 10,000 different articles, and they have an association to regulate sizes and numbers, help to extend the market, and improve the quality of the goods. The manufacturers have consulted together with a view to increasing the consumption, as the amount of product which could be sold was capable of being increased indefinitely by cheapening the cost. There are no pooling arrangements and no discrimination in prices. He asked that the duties on raw material stand as they are; that the duty on oilers be not reduced; that the minimum duty on galvanized ware be 30 instead of 16⅔ per cent, as it is now, making competition from Great Britain too strong; that the duty on nickeled copper and brass household utensils be raised from 30 to 35 per cent, as they can not compete with the United States. Mr. Kemp also protested against any duty on tin or copper plates, as they can not be made economically in Canada.

INCREASED WAREHOUSE FEES AT HALIFAX.

Consul-General Holloway, of Halifax, writes that the Dominion customs department has decided to increase the charge for bonded-warehouse privileges for the bonded department at wholesale stores. The charge for the service of a customs officer for these bonded departments has been $40 annually. The new regulation, which goes into effect on January 1, 1906, provides for an increase, which wholesale merchants say would seriously injure the export trade of Halifax. The present rate is $40 per year, and the new regulations call for a minimum payment of $60 a year, and that only when the services do not amount to more than one hour per day. If the officer is required two hours daily, the fee shall be $120; four hours, $240; six hours, $360, and if for the whole day, $480 yearly. These charges are at the rate of $5, $10, $20, $30, and $40 monthly. In answer to the objection that if Montreal and other large centers can stand the increase Halifax should, the reply is that in Montreal public warehouses are used, and that the system of private warehouses as followed in Halifax does not prevail. A meeting of merchants has been called at the board of trade rooms to consider the matter and formulate a protest.

CUBA.

TAX ON SUGAR PLANTATIONS.

Consul-General Steinhart, of Habana, in reply to inquiries regarding rate of taxation on sugar estates in Cuba, writes as fellows:

The rate of taxation upon plantations is 3 per cent, calculated upon the number of caballerias (33⅓ acres) of cane under cultivation. The production is calculated, more or less, in arrobas (25.4375 pounds) of cane, and estimating that 100 arrobas of cane produce 5 arrobas of sugar,

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the value of the production is taken at the current prices of sugar, i. e., average market price.

This is effected upon the sworn declaration of the owner, verified by the municipal board. If found to be correct the board accepts it, and if not, rectifies it. If the owner does not agree with the rectification he has the right of appeal to the junta provincial. The rate of taxation is the same all over the island. Plantations pay only upon the caballerias of cane that the owner cultivates. The "colonias" (a plantation without a sugar mill) pay only at the rate of 6 per cent in the manner before described. Plantations pay nothing for the industry of sugar making, nor under any other heading, further than the tax of 8 per cent upon the production of cane. The municipality collects the tax, the State collects none.

PERU.

COLLECTION OF TAX ON SALT.

Mr. Richard R. Neill, secretary of legation at Lima, furnishes a copy of the decree recently issued by the Government of Peru, containing the necessary conditions for the collection of the tax on salt by a "Limited liability company" formed in that Republic. The decree follows:

ARTICLE 1. The executive power is hereby authorized to contract the administration of the salt, with a limited liability company, under the conditions which it may consider most convenient for the Government's interest, with a charge for commission not to exceed 6 per cent, and for such a length of time as may be necessary for the more effective execution of the laws Nos. 43 and 44, of December 30, 1904.

ART. 2. For the purpose of fixing the prices for the sale of the salt in the different places of its consumption, the Government shall consider as a tax the same rate which now rules, viz, 5 cents per kilogram for that used for domestic consumption, and 1 cent for that used for industrial purposes.

ART. 3. The limited liability company, to which the present authorization refers, shall be necessarily formed in Peru, by shares offered to the public, so as to give employment to national capital.

CHINA.

CHINESE CUSTOMS DUTIES.

Consul-General Rodgers, of Shanghai, furnishes statistics showing the customs revenue of China for the quarter ending June 30 of the present year and gives the figures for the various ports, which indicate their relative commercial importance. The total amount collected was 9,879,885 haikwan taels for the three months ending June 30, against 7,647,831 for the corresponding period of 1904. The haikwan tael is equivalent to $1.34 gold. The total duties collected in the Empire for the first six months of 1905 were 16,744,902 haikwan taels, against 13,723,552 for the same six months of 1904. The present import duties average a little over 4 per cent on the present silver values.

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TRADE-MARKS.

HOW OBTAINED IN CHINA.

PROPOSED CHANGES IN EXISTING LAW.

TO GUARD AGAINST IMITATIONS—SIGNS AND WORDS EXCLUDED.

The question of trade-marks and other protection in foreign countries is one of the highest importance to manufacturers of special lines of goods. It is especially important to those using the markets of China, where the people are strongly wedded to custom, and where limited knowledge of progressive methods of the outside world makes them suspicious of everything that is new, regardless of any merit that may be presented. In the following report Special Agent Burrill furnishes information that will be valuable to manufacturers and exporters in this connection:

The Chinese law affords no protection to foreign "chops," or trade-marks, a condition that has frequently led to serious complications in the transaction of business in this country. Trade-marks of goods, popular on this market, have been closely imitated and a cheaper and inferior quality has been substituted and disposed of under a spurious mark. This has led to a concerted effort on the part of foreign government representatives in this country to have the Chinese Government promulgate regulations which will minimize this abuse. Under present conditions the merchant in Shanghai representing foreign manufacturers files the trade-mark with his consular representative, and it is then transmitted to the custom-house, where it is recorded by number. The only advantage accruing to the business man under this arrangement is that in the event of trade-mark regulations going into effect he may claim priority and prevent a similar mark, subsequently filed, from being used in China. This is the only object of the transaction, for the Chinese Government at present expressly disclaims any legal protection whatsoever to the foreigner against a counterfeit of his particular trade-mark. Should such a law go into effect the Chinese Government could only aid a foreign merchant to the extent of preventing native dealers from selling goods masquerading under a counterfeited trade-mark. If the "chop" of a foreign manufacturer should be imitated by any other foreigner (and these instances have not been uncommon in China), his only remedy lies in prosecution through his consular representative.

PROVISIONAL REGULATIONS.

The Chinese Government last year formulated and submitted to the representatives of foreign governments provisional regulations governing the registration of trade-marks. They were to become effective

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October 23, 1904. The provisions were unsatisfactory, however, and the American, British, and German associations of Shanghai submitted amendments which were forwarded to the ministers at Peking. They in turn amended the amended draft and submitted it to the Chinese foreign office, which referred it to the Chinese board of commerce, which now has it under consideration. While the foreign merchants here are thankful that this highly important question is now before the determining official body, they do not anticipate relief in the near future, and are adopting universally the unsatisfactory but only means of protection afforded, through the filing of trade-marks for record with the Chinese custom-house. The provisional regulations governing the registration of trade-marks formulated by the Chinese Government, but which were regarded as unsatisfactory by the foreign merchants, are herewith transmitted.

NOTE.—The regulations are on file with the Bureau of Manufactures.

PROPOSED AMENDMENTS.

The following is a rough translation of the proposals of the ministers at Peking to the Chinese board of commerce. No action has yet been taken on these recommendations.

"ARTICLE 1. Both foreign and Chinese merchants who have the intention of using their trade-marks specially can have them registered according to these regulations. Those who had marks in actual use before the first moon of the twenty-ninth year of Kuang-Hsu can either register them in accordance with these regulations or send a specimen of the mark, the name of the goods it is used upon, and the name of the owner and importer here to be put on record. Designs to be used for registration are as follows: Legible alphabet, simple words and seals (pictures, representations, etc.). Articles bearing no trade-mark but the names of the makers or the addresses, etc., are not considered trade-marks and need, therefore, not be registered, though, however, they will be fully protected.

"ART. 2. As the board of trade has to protect the privileges and the rights of the merchants all the regulations regarding the registration will be issued by the board. They will establish a branch office at Shanghai to facilitate this registration.

"ART. 3. All applicants should send in their trade-marks for registration either direct to the head office or ask the nearest custom-house to forward them on their behalf.

"ART. 4. All applications should be accompanied by a note of explanation and three specimens of the trade-mark as it is used, explaining to what kind of goods it is attached. The applicant is also to forward a stamp of the trade-mark for publication in the Official Gazette.

"ART. 5. Applications made up in proper form and after having been published in the Gazette, and no one having come forward to protest within a period of nine months, will be accepted and duly registered.

"ART. 6. If more than one applicant applies for the registration of marks identical to each other for the same class of goods, registration will be granted to the first comer. If the mark has been in use before, he that can produce proof of having used it before the others will be granted registration. If several people apply at the same

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time for registration of a new mark for the same class of goods and none of them can prove prior claim, registration will be granted to the first applicant. If, later on, application is made for registration of a mark that has once been refused or which bears a similarity to another registered, it can be granted registration, but not without the knowledge of the first parties concerned.

SIGNS AND WORDS EXCLUDED.

"ART. 7. Those marks registered in a foreign country at a certain date can be registered here from the same date if the applicant produces his original certificate of registration within four months.

"ART. 8. Signs or words in general use can not be registered as trade-marks. The words 'Cotton yarn,' for instance, do not form a trade-mark for cotton yarn. Registration will also be disallowed for the following marks:

"(*a*) Indecent drawings or fraudulent imitations.

"(*b*) Drawings of Government official seals, national designs, decorations, etc.

"(*c*) Similar marks or designs for similar goods already in use and registered by others.

"(*d*) Designs or devices not in accordance with article 1.

"ART. 9. The period for exclusive use of a trade-mark is twenty years, commencing from the date that registration has been effected. The period for marks registered in a foreign country will be the same as that originally granted by the registrar's office at home; however, it shall not exceed twenty years.

"ART. 10. Application for extension must be made within six months before the expiration of the twenty years period.

"ART. 11. The transfer of the proprietorship of a mark must be notified to the board.

"ART. 12. Registered marks found later on to be against article 8 (*a*, *b*, and *d*), registration will be canceled.

"ART. 13. Nonregisterable marks, registered by mistake, or marks disused for more than two years through liquidation or close of a firm, the party interested may apply for their cancellation.

"ART. 14. Notices of refusal or cancellation of marks will be sent to the parties concerned beforehand.

"ART. 15. Protest against refusal or cancellation of marks should be sent in to the board within six months.

"ART. 16. Merchants residing abroad may appoint their agents to act for them.

"ART. 17. Anyone desiring to see and examine the records of the registration bureau may do so on application.

"ART. 18. Permitting or refusing of registration of marks will be published in the Official Gazette.

"ART. 19. An injured party may prosecute the defrauders and claim damages.

"ART. 20. (*a*) If the defendant is a foreigner the case will be tried by his consul.

"(*b*) If the defendant is a Chinese the case will be tried by both the consul and a Chinese official.

"(*c*) If the complainants and the defendants both are foreign or Chinese the officials concerned are to try the case.

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"ART. 21. The foreign infringer will be punished according to the laws of his own country. The Chinese is liable to imprisonment for a period not exceeding one year, or a fine not exceeding haikwan taels 300. Trade-marks, instruments, and appliances used in manufacturing them, and the goods of which the mark is inseparable, will be confiscated and destroyed if anyone sells, keeps in store, imports such goods, or reuses the packing.

SCALE OF FEES.

"ART. 22. Anyone who can prove that his trade-mark, though an imitation of others, is original and without intention to defraud will not be punished.

"ART. 23. Scale of fees is fixed as follows:

	Haikwan taels.
On application	5.00
Certificate of registration	10.00
Transfer of mark	5.00
Renewal of registration	10.00
Copy of documents under 100 characters	2.00
For every other 100 characters	.50
Inspection of record books per hour	1.00
Report of infringement	5.00
Appeal to higher authorities	10.00
Request for duplicate certificates	5.00
Request for cancellation of registration for self	5.00
Request for cancellation of registration for others	10.00
Certificates handed down to heirs	5.00

"ART. 24. These regulations will come in force within a year.

"ART. 25. All applications received before the date of opening will be treated as having been received on that date.

"ART. 26. Trade-marks, whether registered abroad or not, if actual proof can be produced of having been in use before the first moon of the twenty-ninth year of Kuang-Hsu in China, shall have the privilege to claim first registration.

MEXICO.

PRESCRIBED METHODS AND FEES.

METHOD FOR SECURING LETTERS—LIBERAL REGULATIONS.

Consul-General Parsons reports the rules and regulations of Mexico regarding patents, trade-marks, and copyrights. He advises citizens of the United States to take advantage of Mexico's brilliant prospects by securing patents, trade-marks, and copyrights for their productions. He writes:

The patent laws of Mexico are very liberal and afford excellent protection to inventors and owners of industrial property. This is a fact American inventors should bear in mind. Mexico is a party to the international union or convention, and in view of the great industrial future of the country American inventors should protect in Mexico the work of their brains. Those who have taken out patents in the

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United States, or in any other country which is a party to the international union, have twelve months' priority from date of first application in which to make their Mexican applications. After the lapse of this period the invention becomes a part of the public domain.

HOW TO SECURE A PATENT.

To procure a patent in Mexico the party making application (unless present in person) must furnish his representative with a letter of authority (carta-poder) in Spanish, signed by himself or herself in presence of two witnesses. Ordinarily legalization by a Mexican consul is not required. It must be borne in mind that one carta-poder will not answer for several applications, as each application for either patent or trade-mark must be accompanied by a separate carta-poder. This must be accompanied by a full and complete description, and claims of and for the invention. If they are sent in Spanish ready for filing they must be in triplicate, on clear white paper 330 by 215 mm. (approximately 13 by 18½ English inches), written with typewriter on one side only of the paper, leaving on each sheet a left-hand margin of one-fourth the width of the paper. Of course if they are not sent in Spanish the local representative attends to all the details, which is by far the better way. He should be furnished with full names, profession, citizenship, and residence of applicant.

REQUIREMENTS FOR DRAWINGS.

Drawings must be on white drawing paper equal to 3-sheet Bristol, accompanied by two exact copies on tracing cloth, the size approximately 380 mm. (15 inches) in height by 254 mm. (10 inches) in width, a heavy line 25 mm. (1 inch) from the edges of the paper forming a square within which the drawing must appear. A space of not less than 25 mm. (1 inch) should be left above and below the drawings and within the square for patent office use. The drawings must be entirely free from signatures, writing, or marking of any kind except the letters or figures of reference to the specifications. They should be executed with the least possible number of lines or shading and should be done with India or China ink. One of the drawings must show the complete invention. Drawings must not be folded. They should be sent flat or carefully rolled. Blank forms for letter of authority (carta-poder) will be furnished to applicants by any regular patent attorney or solicitor.

HOW TO SAVE TROUBLE.

Any person desiring to obtain a patent may save all trouble and fully accomplish the object by communicating with the person whom he desires to have act as his representative or attorney, sending him the carta-poder duly signed and witnessed, a simple copy of his United States patent or patent issued by any other country, or a copy of his specifications and claims written on a typewriter. If he has a United States patent, either allowed or issued, further trouble may be saved by sending his representative either the serial or the patent number, or both, and the date of the application if possible, in which case his representative here should be able to procure drawings, copies, and everything required.

It is entirely unnecessary for anyone desiring a patent to come to Mexico. It will not expedite matters in the least, and the party com-

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ing would probably be obliged to engage the services of an attorney or agent to conduct the business.

TRADE-MARKS.

In the matter of trade-mark registration the requirements are a carta-poder, as in the case of patents, an electrotype or cut of the mark, which must not exceed 100 millimeters (about 3¾ inches) in height or width, and bearing the name and city in which the owners thereof are located, and 12 copies of the mark (printed). It is well to send a few extra copies. Previous registration in the country of origin is no longer required.

FEES.

The Government fee in full patent cases, payable in stamps, is $40 Mexican currency, in addition to which there are the stamps on the documents in the case to be considered, and which vary according to the nature of the case. The fee, however, is only an item in the expense, as the services of the attorney have to be considered, and also the fact that he is obliged by the regulations personally to attend to the case in all its phases and steps. Great care is necessary in the preparation of cases including required technical translations. The Government fee in trade-mark cases, payable in stamps, is $5 Mexican currency, and the same conditions hold as regards stamps on documents and for services in drawing up the necessary papers, etc. Personal attention of agent prevails here in trade-mark cases the same as in patent cases.

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GREAT BRITAIN.

SIGNATURES MAY BE REGISTERED.

THE NEW ACT FAVORABLY REGARDED—BROADER DEFINITION.

Consul Mahin, of Nottingham, reports that British manufacturers regard the new trade-mark act of the recent Parliament, which becomes operative April 1, 1906, as a distinct advance upon the present law. He writes:

Probably the most important and beneficial change is the broader definition of a trade-mark. The present restricted definition seriously

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hampers British exporters. Under it many firms have been unable to get their trade-marks registered at home, and therefore have been similarly unsuccessful in a number of important foreign countries, which insist upon the production of certificate of registration in the applicant's own country before granting him a similar benefit. This has operated to the advantage of foreign competitors who, it is asserted, have been able to register in their own countries the marks of British firms, and thus intercept the existing demand for certain classes of goods under trade-marks which the British houses have created. Other changes comprise an enlargement of the class of individuals who can register trade-marks; increased power to the registrar to hear witnesses and determine who is the rightful owner of a trade-mark, and to award costs in such proceedings; increased restrictions on individuals who have registered trade-marks without using them for a period of five years; a revision of the unsatisfactory requirements as to disclaimers, and a new provision as to registration of what are termed associated trade-marks. Under the new law a company will, for the first time, be able to register its signature or the signature of its predecessor in business, and also its own name.

A trade-mark may also in future be limited to a particular color or colors. Heretofore if any mark has been found to be a geographical term, even if it happened to be a small river on the confines of civilization and absolutely unknown to the British public, it would be refused registration as a trade-mark. Now, however, providing such word is not, according to its ordinary signification, a geographical term, it will be registerable. This, it is said, will enable many marks now in use, and for which registration has been previously refused, to be put upon the register. The Government board of trade is to formulate rules for carrying out the act.

WARNING TO EXPORTERS.

Consul-General Guenther, of Frankfort, warns exporters to Turkey against marking their goods with a star, crescent, mosque, or the design of a moslem (male or female). Such designs, according to a German export paper, must be removed from the articles to which they are affixed before entry is allowed, thereby causing trouble, delay, and sometimes serious injury to the goods. Exporters to Smyrna should not lose sight of the fact that if consignments are not removed from the storehouses within eight days after arrival heavy storage charges are levied. Goods for transit shipment have one month free storage in the customs warehouses.

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TRANSPORTATION.

EUROPE AND AMERICA.

PROPOSED SUBSIDY FOR STEAMSHIP LINES.

SUBVENTION FOR A LINE BETWEEN ARGENTINA AND EUROPE—TERMS OF THE PROPOSALS.

Mr. A. M. Beaupré, minister to Argentina, reports that a subsidy measure known as the Luro bill has received the affirmative action of the two houses of national legislation. Mr. Beaupré in previous reports explained the main features of this measure, but during its legislative progress a number of amendments were made. In its amended form the bill provides for a subsidy of 30,000 pesos gold per month for maintaining steamship lines between Buenos Aires and European ports. The sum named is the maximum bonus per round trip. It is provided that bids from steamship companies are to be opened April 15, 1906. The minister writes:

It is calculated that it will take three years for the successful competitor to prepare himself to fulfill his contract and that the benefits of the law can not therefore be enjoyed in full before the year 1909. A bill for temporary relief has therefore been passed, being the minority report of the committee on the counter proposals of the Royal Mail Steam Packet Company, mentioned in a previous report. I transmit a copy and translation of this substitute bill, which provides $30,000 gold per month, to be used by the Executive during three years in the form of bonus to secure more rapid transit, better immigrant accommodations, and better facilities for the transport of beef, butter, and fruit between the port of Buenos Aires and the ports of Europe.

From these two bills it is apparent that the Argentine Government believes it of prime importance to the interests of the country to secure quicker and better communication with the markets of Europe, and that it is determined to secure the benefits thereof at once.

In Europe this matter has aroused great interest. Besides the steamship lines concerned, the various ports and countries interested and even the governments of the same have taken steps to appropriate the benefits of the Argentine law. What the fruit of this legislation will be, both in the matter of temporary as well as of permanent service, it is not well to attempt to foretell; whatever it may be, the agitation that it has aroused in so many different centers can not fail to quicken the pulse and strengthen the current of travel and traffic between the old countries of Europe and the youthful and vigorous Republic of the South.

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SERVICE WITH THE UNITED STATES.

During the agitation and discussion of the past two months that have attended these measures the question of the United States and of the existing service between its ports and those of this great Republic has been raised. The press has evinced some surprise that the American ports were not included. It has been asked: Is nothing to be done to improve the service, or rather to establish a service, with the ports of the north? But these questions have remained unanswered because the Americans are few in number here, the American manufacturers intrusting their interests mainly to European agents, whose interests are at least divided. There are, however, important reasons, as it seems to me, and, I believe, to every American who knows this east coast of South America, for the establishment of regular and rapid and comfortable communication with the ports of North America.

It is an easy matter for merchants in any part of the world to get their goods nowadays. The harbors of the world are full of craft that have had to "lay up" for lack of freights, and steamers of good capacity and indifferent speed ply into every port and corner of the world. The merchants of South America will therefore readily and truthfully answer—and the more readily if they are European, as the most of them are—that they have no difficulty in getting their merchandise out from the United States, and that the facilities are abundant. They are abundant, it is true, but not so abundant in proportion to the trade done as the facilities for getting goods from Europe. And yet the Argentine Government is planning to give outright three-quarters of a million dollars gold per annum to secure an improvement in the already rapid European service.

ADVANTAGES OF FAST SERVICE.

The main advantage of a fast service is not so much in the quick and regular delivery of merchandise; the greater advantage is that it brings the producer and consumer, the factory and the market, closer together. It carries the buyer to the source of supplies, enables him to buy in person of the producer and not from samples in the hands of indifferent or incompetent agents. In short, with rapid and comfortable means of communication the Argentines would readily visit the United States, would soon come to know the extent and value of its production, and would seek its many articles of superior quality. The Argentines are well disposed toward American goods; they are without exception interested in the United States and express the desire to visit them. At present the United States are a distant country because for comfort and speed one must first go to Europe—pass through the markets of Europe to reach them. Were fast communications established the American markets would be the nearest and Europe would be the distant country.

PROPOSALS INVITED.

LIBERAL SUBSIDY OFFERED—TEXT OF THE ACT.

Since receiving the foregoing report from Minister Beaupré, a report was received from Mr. Edward C. O'Brien, Minister to Uruguay.

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inclosing copies of an act of the Argentine Congress providing for a subsidy for fast steamer service between Argentina and European ports. The act is quite comprehensive. It provides for establishing a line of steamers to be under the Argentine flag, and which in time of war shall be at the disposal of the Government. The subsidy is fixed at the maximum sum of $28,000 gold for each round trip, and the contract will cover a period of ten years from date of the first voyage. It is provided that the subsidy can not exceed $56,000 gold per month. A penal clause will be attached to the contract providing for a reduction of $500 gold for each hour steamers are overdue. The act of Congress which authorizes invitations for proposals is given below in full:

ARTICLE 1. The executive power shall proceed to prepare the basis for the public bidding for the establishment of a direct line of fast steamers between Argentina and European ports named in the present act.

ARTICLE 2. It will be an essential condition in order to be admitted in this bidding the offering of steamers of such a type as will be able to make the passage from one of the ports mentioned in accordance with the following schedule of distances:

(*a*) From the port of Hamburg to Buenos Ayres or La Plata and vice versa, fifteen days and six hours.

(*b*) From Antwerp, fourteen days and eighteen hours.

(*c*) From Genoa, Naples, Boulogne sur Mer, Liverpool, or Dunkirk, fourteen days and a half.

(*d*) From Cherbourg, Havre, St. Nazaire, or Southampton, fourteen days and six hours.

(*e*) From Marseille or Bordeaux, fourteen days.

(*f*) From Barcelona, thirteen days and eighteen hours.

(*g*) From Vigo, thirteen days.

The ports of Vigo, Lisbon, and Cadiz, respectively, will be obligatory points of stopping (transit stops) on the way, coming and going; and according to the initial sailing port of the voyage, the bidders may select either the one or the other.

For the trips from Europe to the Republic there will be an allowance of six hours' time for entry and clearance of ports and deviation of route. The allowance will be of eighteen hours time in voyages from the Argentine shore to Europe for difference of meridian, entry and clearance of ports, and deviation of route.

ARTICLE 3. In case the port of Bahia Blanca should be marked as the port of entry to the territory of the Republic for one or more steamers of the bidding firms, the railway time to reach the Federal capital will not be counted, for the purpose of the preceding article, but the fares shall have to include this railway journey within their price.

ARTICLE 4. Outside of European ports only one stop will be permitted for coaling on one of the islands in transit.

REQUIREMENTS FROM BIDDERS.

ARTICLE 5. The companies or firms bidding shall produce or oblige themselves to build a sufficient number of steamers to make two trips

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per month from one of the European ports mentioned, and also from one or more Argentine ports.

ARTICLE 6. The bids must specify:

First. The initial and terminal ports.

Second. The time of the voyage from the initial port, and also from the compulsory transit stop—Cadiz, Vigo, or Lisbon.

Third. The accommodations and tariffs for cabin passengers exclusive of the "de luxe" classes.

Fourth. The capacity, accommodations, and tariffs for immigration.

Fifth. The gross tonnage of the vessels.

Sixth. The net tonnage for cargo.

Seventh. The number of vessels that will be put into commission (in movement) within two years from the date of signing the contract.

Eighth. The amount of the subsidy that they demand for making each round trip.

Ninth. The rest of the conditions that the executive power may determine in the regulating of this act.

ARTICLE 7. The bidders shall inclose with their bids a certificate of having deposited in the "Banco de la Nacion, Argentina," to the order of the department of agriculture, the sum of $40,000 cash, in gold, or in titles of national public debt. This deposit will be returned to the bidders whose bids shall not be accepted within forty-eight hours of the issuing of the decree of the acceptance of one of the bids or the nonacceptance of all of them.

ARTICLE 8. The firm that shall be successful in the bidding shall sign the corresponding contract within forty days of the acceptance of its bid, increasing to $80,000 gold the deposit referred to in the preceding article, in guarantee of the compliance with its clauses. Should the bidder not sign the contract he will lose the deposit made at the time of filing his bid, and should he not comply, after signing it, with the terms therein stated, he will lose the whole deposit.

PROVISION FOR SUBSIDY.

ARTICLE 9. The firm that will secure the contract will enjoy the subsidy stated in the bid, not to exceed the maximum sum of $28,000 gold for each round trip, for a period of ten years from the date of the first voyage. This subsidy can not exceed the sum of $56,000 gold per month, and will be reduced $500 gold for each hour the steamers are overdue, in accordance with the schedule of article 2.

ARTICLE 10. The acts of God and princes and rulers, and the means to prove these, will be determined by the Executive power at the time of regulating this act. The company may commence the navigation as soon as the steamers may be ready, but will have to make two trips per month from the expiration of the time stated in article 6.

ARTICLE 11. The steamers will be under the national flag, and the Government will have the right to purchase them in case of war, after having them appraised by expert surveyors. An indemnity of 10 per cent will be paid, in addition to the value of said appraisement, in which will be duly considered the original cost of each vessel and its decrease caused by natural wear and tear. The Government shall also add to the crew of each vessel 2 officers, 10 sailors, and 10 firemen of the national navy, if it sees fit to do so. These steamers shall not

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pay the port dues and other official taxes with which the seagoing steamers are charged.

ARTICLE 12. The executive power will cause the conditions of this bidding to be published, during sixty days, through the accredited legations in France, England, Germany, Belgium, Italy, and Spain. The bids will be opened on the 15th day of April, 1906, in a public session, by a board formed by the corresponding minister, the minister of the navy, and the general superintendent of ports. This board will classify the bids and will act for the Government as an advisory board regarding the acceptance of the most favorable bid or the rejection of all of them.

ARTICLE 13. The expenses incurred by this act will be taken from the general receipts and will be charged to the same. After the contract is signed with the company successful in the bidding, the amount of the annual subsidy will be included in the corresponding budget.

EXTENSION OF OCEAN LINES.

NEW AND RAPID SHIPS BETWEEN SOUTH AMERICA AND EUROPE.

Minister O'Brien has also furnished an interesting report on the activity exhibited by European shipowners in providing additional facilities for travel between Europe and South America. He writes:

The Hamburg South American Line (Imperial Mail) recently added to its service between Hamburg and Buenos Ayres five new steamers, two of 10,000 and three of 9,000 tons, in addition to its present fleet of two of 8,000 and three of 7,000 tons, mail steamers now regularly employed in this service; fortnightly sailings. This company now advertises to make the quickest time from Buenos Ayres to New York via Boulogne and Southampton.

The Italian Lloyd (New Line), from Genoa to Buenos Ayres, is putting on five new 9,000-ton mail steamers which will make the voyage in seventeen days. The first steamer of this line, the *Florida*, is expected to arrive at Buenos Ayres on the 7th of October; fortnightly sailings.

The Royal Mail Steam Packet Company (British) is adding three new 10,000-ton high-class steamers to its service between Southampton and Buenos Ayres. This company has now practically a weekly service.

The Argentine Government has by recent act of Congress provided a very liberal subsidy for a fast steamer line, under the Argentine flag, between a European port and Argentina, requiring the voyages to be made in thirteen days from Vigo, Spain, to Buenos Ayres; fortnightly sailings.

A Portuguese line, now being established, is to have a fleet of twelve mail steamers, for which the Portuguese Government has offered a subsidy of 2,200,000 francs annually. It is reported that this steamship company will be financed and controlled by French capital.

The Pacific Steam Navigation Company (British), which is operating a line of steamers between Liverpool and the west coast of South America, is constructing two new 9,000-ton passenger ships, to be employed between Liverpool, Montevideo, and Valparaiso; fortnightly service.

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The Company La Veloce and Navigazione Generale (Italian) have also increased their sailings, and have advertised to send out thirteen steamers from Genoa to the River Plate during the present month (October), requiring seventeen days to Buenos Ayres.

To the foregoing list is to be added the steamers of the following companies now employed between Europe and the southern part of South America: Compagnie des Messageries Maritimes (French); fortnightly service. Société Générale de Transports Maritimes (French); trimonthly service. Compañía Italiana de Navigación á vapor (Italian); fortnightly service. Compañía Transatlántica de A. A. López & Co. (Spanish); service monthly.

CARGO STEAMERS.

There are also a large number of cargo steamers, some of which carry European mails, and which are not included in the above statement, but the entries at this port show the number thus employed to be about thirty per month. This remarkably large increase in steamer tonnage between Europe and South America promises immediate and tremendous increase in the working capacity of the agricultural population of the River Plate section of South America, and consequently we may look for a corresponding increase in the exportation of wheat, beef, and other food products which will come in competition with United States products in the markets of Europe. It seems to me that the nations of Europe, having explored the world for suitable countries for colonization investment and a future great commerce, are now riveting their attention upon the development of South America, particularly the southern part. It is not difficult to comprehend this view when it is realized that the Rio de la Plata, which is really an arm of the sea, has tributary to it the largest and most magnificent system of navigable river waterways of the world, extending through an area of undeveloped, fertile soil, capable of maintaining a population as great as Germany, France, and England combined.

PERUVIAN ENTERPRISE.

STEAMERS BETWEEN CALLAO AND THE CANAL ZONE.

There is a general movement among South American countries to secure an extension of existing steamship facilities, several of the countries having made provision for governmental assistance in this direction. Consul-General Gottschalk, of Callao, reports that a movement has been started in Peru to secure a line of steamships for direct trade between Callao and Ancon, which is in the Canal Zone. It is proposed to place six steamships on this line. The vessels will be commanded by foreigners, and the consul-general directs attention of American shipmasters and engineers to this proposition. He writes:

I have been informed that the establishment of a Peruvian line of mail, freight, and passenger steamships, to ply directly between Callao and Ancon, Canal Zone, with a sort of subsidiary line of smaller vessels to make shorter coastwise trips, is now an accomplished fact. The necessary capital, I am told, has been subscribed in the country

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itself, and before long there will probably be six steamers of about 1,600 tons each, making the regular itinerary above mentioned. These facts will doubtless cause a profound feeling of gratification throughout the country.

The general spirit pervading Peru to-day is one of extreme modernism—a desire to cast away tradition and occupy a prominent place in the arts and industries and business. Since the termination of the war with Chile there has been no Peruvian merchant marine, and the country has had to depend for its communication with the outside world, as well as for the interchange of commerce between its own ports (which, owing to the topography of the coast, are often difficult of intercommunication by land), upon, first, a Chilean steamship company, the Cia Sud Americana de Vapores; second, an Anglo-Chilean company known as the Pacific Steam Navigation Company, and, third, upon occasional German steamers of the Cosmos Line, the last-named being cargo vessels which travel without any fixed itinerary. There are also numerous small craft plying between Peruvian ports, but these are all of reduced tonnage and few of them propelled by steam. At times, I am told, the exigencies of the regular steamship lines have proven very burdensome, and it was therefore with a feeling of pride and pleasure that Peru saw the steamship *Iquitos* make its first trip under the Peruvian flag, from Callao to Panama, not long ago. It is now proposed to form a fleet of some five or six chartered vessels, which may later be purchased by the Government, and by means of these and the Peruvian transport *Iquitos* to carry on under the Peruvian flag a regular and rapid service between Callao and Ancon with an "annex line" of smaller vessels plying between Peruvian ports.

CHANCE FOR AMERICAN NAVIGATORS.

A point which ought to be of interest to American shipmasters and engineers is that these vessels are all to be commanded by foreign masters, and to have their engine rooms put in charge of foreigners. Both masters and engineers shall have under their orders Peruvian first, second, and third officers. The pay of the masters will be about 60 Peruvian pounds gold ($292.20 United States currency) per month, and they shall naturally be subjected to no living expenses while aboard ship. The remuneration of the engineers has not yet been decided upon. Subject to the desires of the Secretary of Commerce and Labor, the consulate-general invites the correspondence of properly certificated American shipmasters and engineers, whose applications will at the proper time be presented to the person placed in charge of this coming line of Peruvian steamships.

CHILE.

ARRANGING FOR INCREASED SHIPPING FACILITIES.

Mr. John Hicks, minister to Chile, reports that the Government of Chile has taken steps to increase shipping facilities between Valparaiso and Panama, and to that end is negotiating with steamship companies to pay subsidy in addition to that now paid. Mr. Hicks writes:

One of the great difficulties in the way of a closer commercial connection between the United States and Chile is in the lack of good

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shipping facilities. The passenger and much of the freight traffic of the entire west coast of South America is in the hands of two companies, the Pacific Steam Navigation Company, English, and the South American Steamship Company, a Chilean corporation. Both companies receive a subsidy from the Chilean Government and they alternate in the dispatch of ships between Panama and Valparaiso. Naturally they are in a combination or trust, and it seems difficult to bring about any change or improvement in their methods of doing business. When these steamers take from twenty-five to thirty days between Panama and Valparaiso it can readily be seen that American trade must suffer, for the trip could easily be made in ten days. So long as this condition exists and steamers can come from Europe almost as quickly it will be a difficult matter to increase American business on this coast.

The Chilean Government seems to be awake to the importance of a change. I am informed by the minister of foreign affairs that the Government has taken up the matter of increased facilities with the steamship companies and a great improvement is about to be inaugurated. A proposition has been made to the Pacific Steam Navigation Company to put on a line of fast steamers to make semimonthly trips between Valparaiso and Panama, making the voyage to Callao in four and one-half days and from Callao to Panama in four and a half more. For this extra service the Chilean Government will pay an annual subsidy of £25,000. At Panama it is expected that an arrangement will be made with the Panama Railroad Company for the dispatch of a special train on the arrival of the steamer to connect with the company's steamers at Colon for New York, which will be reached in five days, thus reducing the time between Valparaiso and New York to fourteen days. I am informed by the Chilean Government that the proposition has been accepted by the Pacific Steam Navigation Company's manager here, subject to the approval of the company's directors in Liverpool. It is expected that the Congress now in session will indorse the proposition and vote the necessary funds, and the new arrangement is to go into effect about January 1. * * * This is only one manifestation of the good feeling that exists in this country toward American industries and the American people, and it is unnecessary for me to point out the necessity that also exists of meeting these approaches in a kindly and considerate manner.

MARITIME JAPAN.

PREPARING FOR SOUTH AMERICAN MARKETS.

According to some journals referred to by the Bulletin of the Commercial Geographical Society of Paris, Japan and Brazil are getting together for the purpose of better trade relations. There is talk of a large number of Japanese emigrating to Brazil. A French writer cites certain facts for his paper to prove that the movement is more than a tentative one. These show that Japan is bound to develope trade with Brazil, as it is trying to do with Peru and other countries of South America.

The writer cited intimates that Japan is bound to be on hand when the Panama Canal is cut. One of the largest of Japan's steamship companies has arranged for two 12,000-ton ships to make monthly voy-

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ages between Japan, Callao, and all of the important South American ports. These boats are to be ready by January, 1906. Agencies for them have been opened in Rio Janeiro and Santos. In these cities Japanese agents are at work studying the conditions with a view to settling the question of colonization. For a long time Brazil has been seriously concerned with the problem of Japanese colonization.

The State of Sao Paulo has paid most attention to the problem, going so far in its interest as to send its agents to Japan for the purpose of studying the Japanese people at home. Everything seems to favor a trial. The Brazilians are said to have offered the Japanese free transportation, a period of rest upon arrival, and dwelling houses. The Japanese were to work for a fairly decent salary a certain number of hours each day. The remainder of the time was to be at their own disposal. At first the Japanese were dazzled, but reflection taught them that a people who would be willing to defray the cost of transportation to far-off foreign lands could be cajoled or coerced into paying better wages than those offered. The mistake made by the Brazilians was in offering as wages maximum prices—that is, the prices they had agreed among themselves as the highest possible to be paid.

After long deliberations, no one being willing to yield, the discussion was dropped. This all happened just as Japan and England signed their new treaty. It is thought that the Brazilians expect to find in the Japanese virtues that are said, by those who know the Orient best, to belong to the Chinese. At any rate the revival of the immigration efforts only goes to prove the allegation that they had been well under way, and, further, that Japan is favoring them at the present time. In the event that the Orient pours its millions into South and Central America the problem connected with the wealth of the Tropics will be in a fair way of a successful solution.

SUBSIDY FOR AN ARGENTINE LINE.

Consul Brittain, of Kehl, Germany, reports that according to a recent article in a German newspaper the Japanese Government has recently granted a subsidy to a Japanese-South American steamship line, which plies between Japan and Buenos Aires, Argentina. The object of this is to increase the imports of wool, flour, and wheat from Argentina, which products are chiefly needed and desired for Japan's army and marines. An English newspaper also reports on a similar matter, and remarks: "The scheme, which has been under consideration for some time, for the immigration of Japanese workmen to Brazil and the creation for that purpose of a direct Japanese steamship service to Santos and Rio de Janeiro is about to be realized. Two special commissioners of the Japanese Government are now examining, on the spot, the proposal of establishing a Japanese bank at Rio de Janeiro." The same English newspaper also reports that "a syndicate of several banks and commercial firms in Bremen has, in connection with the shipping firm Horn, of Schleswig and Lubeck, formed a new steamship company under the name of the Roland Line, to carry on a direct service between Bremen and the west coast of South America. The formal constitution of the new company will take place in the course of this month."

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NEW GERMAN LINES.

BIG COMPANIES IN ACTIVE COMPETITION.

Consul-General Guenther, of Frankfort, writes that it is reported from Bremen that two new steamship companies have been formed at Bremen, with an aggregate capital of 15,000,000 marks. One of the companies, the "Roland Line," whose capital is 9,000,000 marks, will run directly to Chile and Peru and will be of great importance to Bremen, as heretofore that port had no regular steamer service to the west coast of America. The other company, "Midgard," will have docks at Mondenham, where it has purchased dock facilities from the government of Oldenburg for $300,000.

A private telegram from Hamburg to the Frankfurter Zeitung states that the result of the conferences of the Hamburg shippers for the purpose of meeting competition of Bremen are just being published. Systematic efforts in competition by Bremen are shown in the establishment, by the North-German Lloyd, of the Australian and Java line to compete with the Hamburg-Australian line, also in the Bremen "Atlas Line" in competition with the Hamburg "Levant Line" and in the establishment of the Bremen "Roland Line" to compete with the "Cosmos Line." The latter retaliates now with lines from Bremen to New York and Baltimore, and has petitioned the chancellor of the Empire for a concession to carry on an emigrant service.

FAST OCEAN SERVICE.

HONGKONG TO VANCOUVER IN SIXTEEN DAYS.

Consul-General Holloway, of Halifax, writes that the Canadian Pacific Company is protesting against the request of the Allan line for a ten-year Atlantic mail line contract being granted. The Canadian Pacific has declared that the letting of such a contract will seriously interfere with the transportation plans the Canadian Pacific Railway is perfecting. That company promises to so improve its service on the Atlantic, across Canada, and on the Pacific, that the whole of the oriental mail and passenger business entering at Hongkong will be diverted to the Canadian Pacific route. It is planned to reduce the time from Hongkong to Vancouver from twenty-one to sixteen days by increasing the speed of the Pacific steamers from 12 to 17 knots. The time across the continent is to be cut from six to four days by increasing the average train speed from 30 to 45 miles an hour. The boats which are planned for the Atlantic service are expected to get mails and passengers across in between five and six days. To carry out this programme the Canadian Pacific officials state that a large expenditure will be entailed, and the company feels the Government should give it all possible assistance. The company wants the Atlantic subsidy for its vessels and claims that it should at least have the opportunity to perform the service when the Allan contract expires this year.

THE SUEZ CANAL.

IMPORTANCE AND COMMERCIAL VALUE.

Consul-General Guenther, of Frankfort, writes that the construction of the Panama Canal and the recent obstruction of the Suez Canal by a sunken ship, which had to be removed by dynamite, has revived

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public interest with reference to the commercial value of the Suez Canal and its steadily growing remunerativeness. Its great importance to commerce and navigation is well known and is best proven by a comparison of the distances of the various routes. The distance from Bremen, for instance, to Bombay on the old route by way of Cape Horn was 11,200 miles; through the Suez Canal only 7,000 miles. The following table shows how rapidly navigation through the Suez Canal developed:

Year.	Number of steamers.	Tons.	Receipts.
			Francs.
1871	765	361,467	8,993,732
1876	1,457	2,096,771	29,874,998
1881	2,727	4,136,779	51,274,352
1886	3,100	5,767,655	56,527,390
1891	4,207	8,698,777	83,422,101
1896	3,409	8,650,283	79,569,194
1901	3,699	10,823,840	100,386,397

In 1890 71.5 per cent of the vessels passing the canal carried the British flag, while only 8.1 per cent carried that of Germany. During the last few years this ratio has changed considerably in favor of the German flag, as during 1901 only 56.1 per cent were British while 13.8 per cent carried the German flag. The British flag is, of course, still at the head, followed by the German in second, the Dutch in third place, and the French fourth.

Beside merchant vessels, 97 men-of-war, 57 military transports, and 9 yachts passed through the canal. Ninety-five ships belonging to the North German Lloyd passed the canal in 1904, among them the steamer *Grosser Kurfuerst*. This ship, with 13,200 tons, is the largest ever passing through the canal. The charges per net ton of cargo since January 1, 1903, is 8.5 francs and 10 francs per passenger. If, for instance, the *Grosser Kurfuerst* passes through the canal with 10,000 tons cargo and 1,000 passengers, the company has to pay 95,000 francs as tolls. From January 1, 1906, the toll on the cargo will be reduced to 7.75 francs per ton.

MISCELLANEOUS.

EXTENT OF CANADIAN SUBSIDIES.

Consul-General Holloway, of Halifax, reports that figures just compiled by the department of trade and commerce at Ottawa show that for the fiscal year ending June 30 last the Canadian government expended over one million dollars in mail and steamship subsidies. The larger amounts are given roundly as follows:

Canada and Great Britain	$328,000
Canada and Australia	194,000
Canada and South Africa	146,000
Canada, China, and Japan	73,000
Canada, British West Indies, and Demerara	65,700

The balance, or about $209,100, has been made up by interprovincial services. The British Government pays the same amount as Canada toward maintaining the services to China and Japan and the British West Indies.

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ENGLISH STEAMERS FOR CUBAN PORTS.

Consul Hamm, of Hull, reports that announcement is made in the English papers that steamers will be dispatched regularly every eight weeks, leaving Hull, via Antwerp, for Vigo, Coruna, Bilbao, Habana, and other Cuban ports. The consul says that, should sufficient cargo offer, in all probability the company may be induced to send a boat once every month. At present there is very little cargo offering from this district, but it is hoped, by sending boats at regular intervals, to build up a trade between Cuba and Hull.

GERMAN SHIPBUILDING INDUSTRY.

According to Consul-General Guenther, of Frankfort, the shipbuilding industry of Germany has made remarkable progress during the last decade. He reports that along the German coast from Emden to Elbing numerous shipbuilding yards are busy, giving remunerative employment to many thousands of workingmen and benefiting many other branches of German industries. According to the statement of the Lloyd register, just published, with reference to the shipbuilding industry of the world, on September 30, 1905, there were 72 vessels, with an aggregate tonnage of 224,642 gross tons, in progress of construction in Germany. This number, however, does not include the yards at Dantzic, of which no statement was at hand, nor any war vessels or ships of less than 100 tons. The North German Lloyd since 1892 had paid about $50,000,000 to German shipyards and during the last six years had no ships built anywhere else but in Germany. The number of ships, however, built for German account abroad is still considerable. England, at the time of the Lloyd report, was building 7 steamers, with 50,440 gross tonnage, for German shippers.

RAILWAYS.

CONSTRUCTION IN CHINESE EMPIRE.

MANY MILES BUILDING AND PROJECTED—PREJUDICES RAPIDLY DISAPPEARING.

Consul Haynes, of Nankin, reports considerable activity in railroad building among the Chinese. After describing the early efforts of Europeans to establish railroads and the difficulties with which they were met, reasons for the opposition offered by the mandarins and working classes are assigned or suggested. The possibilities of the Chinese Empire are referred to and present conditions are contrasted with those of the United States. China has 1 mile of railroad to each 130,000 inhabitants, while this country has 1 to every 360 inhabitants. All Asia in 1900 had only 30,000 miles for nearly one-half of the world's population, while the United States, with less than 80,000,000 souls, had 220,000 miles.

Coal, when carried overland in China, costs as much as 50 cents per ton per mile, while the cost in this country, in some cases at least, is

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less than 1 cent. Concessions are constantly being made and are constantly changing hands. Lines are being finished and projected so fast that writers find it hard to keep pace with the movements. The report is full of such information as is needed to furnish one a good idea of what is going on in that part of the East which is destined to play a most important part in the industrial and commercial world. The report follows:

The construction of the first railway in China was due to the enterprise of a few European residents in the Shanghai district, who combined to form a company with the object of constructing a line between Shanghai and its outer roadstead at Woosung. The distance is only 12 miles, and the line was narrow gauge. The history of this undertaking is instructive. Opposition to the scheme was manifested by the mandarin class from the outset, and it was only with the greatest difficulty that the strip of land required was obtained. As most of the district traversed was purely agricultural the differences raised were fewer than would have otherwise been the case. The work was finished and the railway opened on June 30, 1876. Contrary to expectation, the attitude assumed by the natives was one of friendly curiosity. They flocked to the railway in greater numbers than could be conveyed. But the management had not reckoned with the mandarin. It is related that after a breakdown, in which two goods trains collided, the mandarin proposed that the débris should be left as it was and the road reconstructed round the wreckage.

POWER OF THE MANDARIN.

A coolie, who had been bribed by the offer of a handsome payment to his family, walked in front of the train and was cut to pieces. Demands were forthwith made by the Chinese officials that the driver of the engine should be given up to them on the life for life principle. A lengthy correspondence ensued, and the mandarin, finding no impression could be made on the railway people, worked on the feelings of the native population so as to cause them to remain in a state of incipient revolt against the new mode of progression. It was just when the attitude of the people began to cause uneasiness in the British settlement that the Chinese Government offered to buy the railway, and acting on the advice of Sir Thomas Wade, the British minister at Peking, the railway company accepted the offer on the understanding that the Chinese should continue to work the line, which, despite the organized opposition, was being largely patronized by the natives. The transfer was accordingly made, and the mandarin ran the trains for a while, when suddenly, without any reason or formal notice, the rolling stock was put on board a couple of steamers and sent to Formosa, while the rails were pulled up and thrown into the sea. A few years later, however, the road was reconstructed. Its control was taken over from the Chinese Imperial Railway administration and invested in the board of commissioners of the Shanghai-Nanking Railway in October of last year.

Such opposition has its reason. On the rivers the army of trackers may be thrown out of work; while traditional objection to mining and indeed to every industry but agricultural prevents the superabundant

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population finding employment in the many new enterprises which steam communication would inevitably open up were the restrictions that now forbid all enterprises of the kind removed.

COMPARISONS AND RAILWAY MILEAGE.

The United States and China, the two great continental countries lying in the Temperate Zone, are both ideal lands for gigantic systems of railways, but while the former has 1 mile of railway for every 360 inhabitants China has about a mile for every 130,000 inhabitants. It was stated in 1900 that there were 30,000 miles of railway in Asia, two-thirds of which belonged to British India.

The Trans-Caspian and Trans-Siberian Railway accounted then in its unfinished state for 3,200 miles, Japan had 3,200 miles, French Indo-China 120 miles, but in Cochin China, Anam, and Tonkin they were soon to have 2,400 miles. Java had 1,000 miles, Turkey in Asia 1,500 miles finished and 600 projected or under construction, and Russia was to join Astrakhan to the general Russian railway system, while China at that time had only 300 miles completed and owned by the Government, which it was stated were very remunerative, and European syndicates had obtained concessions for 3,600 miles of railway in China, the construction of which is already well advanced. These will traverse regions rich in minerals and agricultural products. The splendid waterways afford great facilities for transit, and China is better supplied with waterways, both natural and artificial, than any other country in the world, except, perhaps, Holland, but away from them carriage by land is often expensive. It sometimes costs 50 cents per ton per mile to take coal by land in China, while in Great Britain the cost is from 1 to 2 cents a mile a ton, and in the United States half a cent for the same distance. The coal fields in China have been laid down on a grand scale. To instance only one, that of Shansi, with from 15 to 40 foot seams, has a continuous field 13,500 miles in area equal to the best Pennsylvania anthracite. There is also a rich bituminous deposit in the same province. So that in the mere carriage of coal there should be a fine future for railways outside of passenger traffic, freight trains, market produce, etc.

RAILWAYS COMPLETED AND PROJECTED.

A late annual report of the China Association gave the following railways completed and working:

1. The Imperial Chinese Northern Railway from Peking to Tientsin and Shanhaikwan (with extension to Sinninting and Newchwang).
2. Peking to Paoting-fu (built by the Chinese Government, but incorporated as part of the Lu-han line. The Lu-han line is often called the Pe-han line, and refers to the line between Peking and Hankow).
3. Shanghai to Woosung (reconstructed by the Chinese Government, but to be incorporated as part of the Shanghai-Soochow system).

Following are the railways in progress or projected for which concessions have been granted:

1. Japan for railways; (*a*) from Seoul to Chemilpo, and (*b*) from Seoul to Fusan, in Korea.
2. Russia, for the so-called Chinese Eastern Railways in Manchuria.
3. The Russo-Chinese Bank, for a line from Chengting (a station on the Lu-han line in Pechili) to Tanjuen, the capital of Shansi.

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4. A Franco-Belgian syndicate, for a line known as the Lu-han or Pe-han from Peking to Hankow.

5. An American syndicate (which has agreed, since, to share its interests with the British and Chinese corporation), for a line from Hankow to Canton.

6. Germany, for a railway triangle from Kiaochow to Tsinan, Kiaochan to Yihien, in Shangtung.

7. An Anglo-German syndicate, for a line from Tientsin to the Yangtsze opposite Chinkiang.

8. The British and Chinese Corporation for lines: (*a*) From Shanghai to Soochow to Nanking. (*b*) From Shanghai to Hangchow, with possible extension to Ningpo. (*c*) From Pukon, opposite Nanking, to Hsinyang, a station on the Lu-han Railway, in Honan. (*c*) From Canton to Kowloong.

9. The Peking Syndicate, for lines (*a*) from Taokow, on the Wei River, to Weihwei and Tsechow; (*b*) from Tsechow, via Honan-fu, to Siang Yang, on the Han River.

10. France, for lines from (*a*) Pakhoi to a point not yet determined on the bank of the West River, presumably Nanning; (*b*) Lungchow, on the frontier of Tonkin, to Nanning or Pese; (*c*) from the frontier of Tonkin, presumably Laokai, to Yunnan-fu; (*d*) Kwang Chow Bay, across the neck of the peninsula, to Om-pu.

Since the above report was made by the China association many changes have occurred and are daily happening. It is difficult to write an up-to-date report concerning railways in China, from the fact that concessions are changing hands, lines are being finished, and new lines projected so rapidly that when the report is published many of the facts contained therein are ancient history.

LATEST REPORTS.

The following are some of the very latest notes concerning railroads in China: The Shangpu and the Waiwupu have received telegrams from a large number of influential merchants and gentry of Canton and cities between there and Kowloong, strongly opposing the desire of a certain British syndicate to build a line between the two points, and claiming that the work should be done by Chinese capital alone. Owing to a report that the governor of Hongkong has said to the legislature in Hongkong that he has asked the British minister at Peking to apply to the Waiwupu for concession to build the Kiu-Kiang-Canton railway with British and Chinese capital, the viceroy of the Liang-Kwang provinces has telegraphed to the Waiwupu inquiring whether the report is true, and adding that if it is he wishes to obtain details regarding the attitude of the British minister in this matter. The viceroy further says in the telegram that the proposed railway is a very important route and ought to be built with Chinese capital, but if concession has already been made, then the provisions in the agreement ought to be such as will protect the rights and privileges of the Chinese Government.

POSSIBLE PURCHASES.

A Peking dispatch states that H. E. Sheng Kung-Pao has memorialized the Throne recommending the purchase of the Luhan Railway by the Imperial Government from the hands of foreigners. His excellency states that although run under a joint partnership of Chinese

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and foreigners, the fact remains that the latter control the road because they have furnished the greater portion of the funds to construct the line, and by virtue of which they have the power of appointing all the employees and also to keep all accounts relating to expenditure and income. The control of the Luhan Railway is thus in the hands of outsiders, which is detrimental to the true interests of the country. Should the Imperial Government purchase the line, it will be easy for the Government to supervise all expenditure and income. Such a step would, however, require money, and the memorialist states that he has been lately conferring with the agents of a certain financial institution with reference to a loan which will suffice to repay all foreign capital sunk in the railway.

MONTHS REDUCED TO DAYS.

Work was recently commenced on the Chengchou-Kaifeng road. It seems certain that within a few months what now is a journey of a day and a half to two days across a sandy desert will be a matter of only a few hours. If Kaifeng is then connected by rail with Nanking and Shantung, as it most likely will be in the near future, what used to be a journey of months into the far interior of China will easily be made in a day or two. While the survey between Chengchou and Honanfu to the west has been completed, as yet nothing is being said or done as to the construction of this part of the line, but it seems certain that a line passing through Honanfu and running on to Hsianfu, at least, must eventually be constructed.

It is believed that a commencement will be made with the Changchikou (Kalgan)-Kulon Railway before or at the same time as the opening of the Peking-Changchiakou Railway. It is probable that Russia will object to the Chinese building the above line, but H. E. Yuan Shih-Kai is urgently informing the Chinese Government that there is no valid reason against the carrying out of the scheme.

The railway through Yunnan, for which the French have obtained a concession, is progressing, but not very fast, owing to a scarcity of coolies. It is hoped in course of time to connect Yunnan with Szechvan, but the viceroy has refused to grant a concession to any foreigner. Public opinion fully indorses his views.

The Chengting-Taiyuan narrow-gauge line is about finished, much to the credit of the French energy, financing, and enginnering that called it into being.

The Peking Syndicate Railway, a short, slanting line bisecting and bisected by the Luhan line, has for some months been doing the work for which it was mainly built, viz, bringing coal from the anthracite fields near Chinghua, on the border of Shansi, to Taokou, the head of navigation of the Wei River, a regular trade route to Tientsin.

COSTA RICA.

COMPLETION OF COSTA RICAN-PACIFIC RAILWAY.

Consul Caldwell, of San Jose, writes as follows in regard to railway construction in Costa Rica:

The report of the engineers appointed to survey a route for the completion of the Pacific Railway has been presented to the Government. The report recommends the extension of the line from its

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present terminus at Santo Domingo de San Mateo to Esparta, to connect with the road from that point to Puntarenas. The distance to be covered is, according to the plans presented, 21 miles. It is proposed to relocate 4 miles of the line between Esparta and Puntarenas, straightening curves and reducing grades. This makes a total of 25 miles. The estimated cost is $32,550 per mile, or a total cost of $813,750. In addition, it is proposed to construct a branch from a point on the line already built to Alajuela, a town 13½ miles west of San Jose and terminus of the railroad to the Atlantic coast, thus giving that town more direct connection with the Pacific. The length of the proposed branch is 4 miles and the estimated cost $60,450. This sum added to the above estimate brings the total up to $874,200.

The permanent commission of the Congress of Costa Rica, authorized to pass laws in the intervals of sessions of Congress subject to the approval of that body at its next session, by decree of November 22 has authorized the executive power, whenever deemed expedient, to proceed with the construction of the lines above referred to, and for that purpose to make use of the national credit for an internal loan not exceeding $930.000, at a rate of interest not exceeding 8 per cent per annum.

CUBA.

CONCESSIONS FOR EXTENSION.

Consul Buehr, of Cienfuegos, reports that a concession has been made by the Cuban Government for a railroad extension and directs attention of American dealers in electric and railroad supplies to this opportunity to furnish equipment from the United States. He advises parties interested to place themselves in immediate communication with the general manager of the Havana Central Railway. Mr. Buehr writes:

The news of the granting and signing of the concession to the Havana Central Railway for the extension of its railroad tracks from Guines to Cienfuegos is a matter of favorable comment in this city and was received with great satisfaction by the merchants throughout this district. It is to be an electrict railway, and the line between Habana and Guines is expected to be in actual operation early in the spring, when the work of construction between Guines and Cienfuegos will be commenced and pushed to an early completion.

A vast extent of virgin land in the provinces of Habana, Matanzas, and Santa Clara will be gradually brought under cultivation if this enterprise is carried to fulfillment, as now seems reasonably certain. It will not only give employment to a large number of laborers, but will contribute in no small degree to the material upbuilding of this section of Cuba.

Cienfuegos and the intermediate points would derive great benefit from the construction of this road, as the products from the interior regions would find outlet through this port. Its completion would shorten the duration of the passenger travel between Cienfuegos and Habana from three to four hours and reduce the cost of railroad fare in proportion. It would also place Cienfuegos in direct communication with many outlying towns under its political jurisdiction, which, in itself, is a matter of no small moment.

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MOUNT BLANC.

TO THE SUMMIT BY RAIL.

Consul Keene, of Geneva, furnishes a clipping from the Geneva Journal, which states that work for the construction of the railroad to the summit of Mont Blanc has begun. The line will be built like the Jungfrau line in the Bernese Oberland, Switzerland (system Guyer-Zeller). It will have a total length of 19 kilometers (11¾ miles) and will, it is hoped, be completed within five or six years. From the Fayet to the last station (via Chamonix, as there is already a railroad between the Fayet and Chamonix) the fare will be 100 francs ($19.30), and the trip will require four hours. The carriages will be heated and lighted by electricity, and the train will be composed of an electrical engine and two saloon cars, made to accommodate about 80 people. A special arrangement of the windows will permit all travelers indiscriminately to enjoy the scenery. Three kinds of powerful brakes, independent of each other, will be attached to the cars, thus rendering all accidents impossible. The telephone will be established along the line and will connect any point thereof with the head stations.

CAIRO.

Consul Masterson, of Aden, writes that one of the most important feeders of the great Cape to Cairo railway has almost been completed in the building of a line from the Sudan country across Egypt to the east, and having for its outlet a point on the Red Sea just north of Suakim. The name of the terminus point of the road on the Red Sea has been called Port Sudan, and it is hoped to make this new port not only a railroad point but a great distributing center for the Red Sea coast and across on the Arabian shore.

TRAMWAYS.

SPAIN.

AN ELECTRIC ROAD MUCH NEEDED.

Commercial Agent Price, of Jeres de la Frontera, writes that a correspondent in Gloucester, Mass., recently wrote to him inquiring as to the advisabilty of building an electric tramway in that place, but the correspondent failed to sign his name. In response to the inquiry the commercial agent writes as follows:

There is one old-fashioned wagon, drawn by 3 slow mules, which makes 5 or 6 trips a day from the railway station to one of the public squares, a distance of about three-fourths of a mile, and sometimes goes through the principal street to the fair grounds, a distance of 1½ miles. It carries 600 or 800 passengers daily for a 5-cent fare. If the car was a clean and attractive carriage there would be a great increase of passengers.

The streets here are wide and level, with a solid rock foundation. There in no need of ballast. All the work necessary would be laying

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the ties and spiking down the rails. I think the road could be ready for the cars for less than $2,000 per mile. The city of Jeres and Santa Maria and other towns would give a subsidy of $30,000 or $40,000. The company could issue its bonds for 75 per cent and their stock for the same amount per mile as the bonds. It seems as if this is an opening for American skill and capital. It would be a great improvement for these cities and bridge the gulf from ancient Moorishdom to modern times.

CONDITIONS FAVORABLE.

There are several small towns within a distance of 8 or 10 miles that have no connection by rail with Jeres. There is now a projected railroad from Jeres to two other towns. Surveys and estimates have been made, but no constructing company has yet been found. It is certain that the installation of electric tramways would be attended with most favorable results in the interests of Jares by establishing closer connections with adjoining towns with which there is now no means of travel and transportation. A tramway of 25 miles could be built which would connect three very important towns and furnish available means of travel to passengers from other towns in this province. The duty on American rails is 12 pesetas per 100 kilograms, or about $17 per ton. However, rails can be bought very cheap at Bilbao.

THE TROLLEY SYSTEM IN VIGO.

Consul Harmony, of Corunna, Spain, writes that a scheme, which is likely to be accepted, has been made by Mr. Emilio Montenegro, of the Bank of Vigo. It comprises five lines of tramway and one side line, altogether about 14 kilometers in length. The trolley system will be adopted. The rails are to be of Bessemer steel, Phoenix type, with automatic switches. Gauge of line, 1.44 meters. Minimum radius of curves not to exceed 16 meters. As regards rolling stock, there will be wanted 39 motor carriages and traction cars to be in constant circulation. Motor carriages to accommodate each 32 and traction cars each 24 persons.

There will be two principal and two auxiliary stations. The electric power, 100,000 volts per 200 horsepower, will be furnished by the gas company from the falls of the river Lerez. Telephonic service to be established for the use of the line. The estimated cost is pesetas silver 1,660,000, inclusive. Persons interested may apply for further particulars to Mr. E. Mulder, consular agent at Vigo, from whom I have obtained the information incorporated in this report.

ENGLAND.

SURFACE-CONTACT SYSTEM FINDS FAVOR.

Consul Mahin, of Nottingham, reports results of recent efforts to do away with the overhead trolley in England. The plan employed is by surface contact, and the system is said to be so successful that the contractors guarantee a city against loss and give bond to put in the "familiar trolley" if their surface system fails to give satisfaction. The consul writes:

The town of Lincoln, with 50,000 population, 33 miles northeast of Nottingham, has adopted a street-railway system which has several

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unique features. Construction is now under way. The line will be about a mile and three-quarters in length, eight cars will be used, and the entire cost will be about $140,000. The system was adopted by the Lincoln city council after long and careful investigation and consideration, and the securing of guaranties that place the corporation beyond possible risk of loss, such, for instance, as an undertaking by the constructors of the line to equip it with the familiar trolley if their system failed to work satisfactorily. The system adopted is known as the "G. B. surface contact." The initials stand for Griffiths & Bedell, the patentees. The inventor is Mr. B. H. Bedell, an electrical engineer. The invention was substantially completed in 1904, though some modifications have since been introduced. An experimental line has been operated near London for over a year, but Lincoln is the first town to adopt the system.

RESULTS FROM EXPERIMENTS.

A dozen or more surface-contact systems have been tried and submitted to the judgment of tramway engineers and municipal authorities, but, if I am correctly informed, the "G. B." is the first British invention to be adopted for practical use in this country. It is claimed, being the latest, to have eliminated all the faults discovered in other systems and to be as near to absolute perfection as is possible. An American surface-contact system, the Lorain, has been operated at Wolverhampton for the past three years. The last report of the tramway committee of that city's council says the operation of the system has been satisfactory.

SCOTLAND.

OPERATION BY MUNICIPALITY.

Consul Fleming, of Edinburgh, reports the formal opening at Leith of electric tramways which have been constructed and are to be operated by the municipality. He writes:

Early in November the formal opening took place of Leith electric tramways, which have been constructed and equipped by the corporation and are now being worked as a municipal undertaking. In October, 1904, the horse tramways, plant, and car depot owned and operated by a private company were purchased by the corporation for $291,990. The electrification of the system, which extends to 12½ miles of single track, with single overhead wires, was begun in February and carried through in nine months under the immediate direction and supervision of the corporation engineer and other officers, no part of the work having been intrusted to contractors. The total cost is now found to be $864,431, including cars and purchase price, which is $14,599 less than the engineer's estimate. The most difficult part of the undertaking was the alteration of a swing bridge over an arm of the harbor, which often has to be swung round to allow of the passage of vessels. The overhead wires on the bridge receive the electric current through gun-metal clips at either end.

The raising of the bridge preparatory to its being swung round disconnects these wires, and when it is again placed in position the wires are charged by the two parts of the metal clips coming together. To

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prevent any possibility of a car running into the harbor when the bridge is swung, automatic "catch" points are placed in the street about 50 yards from the bridge. When the latter is swung to allow a vessel to pass, the points are automatically set in such a way that should an accident cause a car to get out of control it will run to the side of the street instead of into the harbor. The 36 cars, which were purchased from the British branches of two American electrical engineering companies, are fully up to date in design and construction. The electric current is obtained from the corporation electricity station at 2½ cents per unit. In the matter of fares the lines are divided into sections. Fourteen sections have 1-cent, five 2-cent, four 3-cent, and two 4-cent fares. The average length of the 1-cent sections is about half a mile. The longest route in the restricted area of Leith does not exceed 2 miles. The present officially estimated population of that city is 80,000.

MOTOR BOATS.

NAVIGATION OF RIVERS AND CANALS.

SUCCESSFUL EXPERIMENTAL TRIP ON THE RIVER RHINE.

Consul Brittain, of Kehl, in the following report, describes an experimental trip of a motor boat designed to navigate canals. He writes:

The Messageries Fluviales, of Strassburg, has recently tried an experiment with a newly invented so-called motor boat or motor canal boat. This boat is made of metal, was built in France, and is patented. It is 38.50 meters (126.31 feet) long and 5 meters (16.40 feet) wide and has a carrying capacity of 280 tons. Although referred to as a motor boat it is propelled by a specially constructed boiler and engine of 25 horsepower, placed at the rear end of the boat. Two specially constructed paddle wheels do the propelling, and automatically rise and fall as the boat is light or laden, thus keeping the same depth in the water. Great stress is laid upon this patent, for it is claimed that a screw or propeller on a canal boat gets fouled with the vegetation of the canals and rivers, while with this new arrangement the danger is overcome entirely. Coal is used for the boilers and four men are in charge of the boat. Longer boats can not be constructed on account of the limited dimensions of the locks.

The company recently sent the boat from Strassburg down the Rhine River to Antwerp, where it arrived in seven days, including several unavoidable delays. The boat is supplied with the patented Fernez chain brake, which is used when steaming downstream, when the water is high and the stream swift. It is claimed that it is the first canal boat on the German canals which is propelled with other than the usual horsepower.

ANTWERP TO STRASSBURG.

The return trip from Antwerp to Strassburg was made in twenty-seven days, and this through the Meuse River and canals of Belgium and France and the Rhine-Marne Canal of Lorraine and Alsace to

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Strassburg, covering a distance of 749 kilometers (465.45 miles). Much delay was necessarily caused by passing through the many locks, some 230 in Belgium and France, and 64 locks alone from the French boundary to Strassburg, yet the experiment was very satisfactory to the company. Mr. Adolf Schleiffer, who is a member of the company, remarked that the canal boats driven with horsepower consume or require from forty-five to fifty-two days, and have even taken sixty days for this trip. It is also claimed that the weather in Belgium was very stormy at the time and caused high water on the Meuse River, necessitating great caution in steaming. The company is now constructing boats with 45 horsepower engines and will thus be able to further reduce the time of transit. It is also anticipated that the improvements in the Brussels-Charleroi Canal will soon be completed, and that the use of this canal will also reduce the distance by 55.93 miles, and thus the company anticipates to soon be able to cover the distance in twenty to twenty-two days.

This recent experiment has given Strassburg and this whole section a new and rapid transportation line which will be of vast interest to Strassburg, for the boats will be able to travel throughout the year, with the exception of a possible few weeks when the canals may be frozen. The Rhine is only navigable for six to seven months of the year, especially as far as Strassburg. It is the intention of the com pany to handle only the better class of freight, as packages, wheat, etc., and not coal or wood. Although coal must be used as the motive power, yet as two trips can be made to one trip of the horse-driven boats it will naturally develop to be the cheaper method of propulsion. It can be further stated that the boilers and engines of these boats are specially designed and constructed so as to get a greater amount of work and power from a given amount of coal than it is possible from the usual line of engines.

BELGIUM.

PREFERENCE FOR AMERICAN BOATS IN BELGIUM.

Consul Mowrer, of Ghent, writes that the use of motor boats in Belgium is constantly increasing, especially in Flanders and other sections of that Kingdom traversed by rivers and canals. A variety of makes are sold, but it seems that those from the United States are given preference. He says:

It may be said that the introduction of automobile boats in Belgium is to an extent keeping pace with the use of automobiles, particularly in localities traversed by rivers, canals, lakes, etc. This is especially true of the Flanders with their numerous intersecting canals. As to the motor employed, preference seems to be given to the American type on account of its strong construction, regularity of movement, and long life without excessive expense for repairs. To the present time most boats are for pleasure purposes, consequently the absence of trepidation from these motors and their mechanical simplicity makes them best adapted to the requirements of the amateur. This is specially true of the two cycle motor, which is made without air valves. Nearly all American motors are furnished with an injector instead of a carburator, which prevents the change of temperature (a

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condition which frequently presents itself on the water) from exercising any influence whatever upon the carburation. Among the makes sold in Ghent are the "Wolverine," "Truscott," "Lozier," as well as several others. A marked preference is, however, given to the three above-mentioned makes. The power of the motors varies from 1½ to 8 horsepower. In general, only the motor is imported from the United States, the boats being built here.

The manufacture of motors for boats at Ghent is only carried on by one firm of importance. Competition with the American type is keen, but the motors from France are rather of greater force, a few being used for racing. The French makes represented are the "Tellier," "Bayard," "Delahaye," "Panhard," and "Mors;" from Italy the "Fiat," and motors from the firm of Esher Weys & Co., of Zurich, and Meissner, of Hamburg. The best method to sell American motors appears to be to establish an agency in which a stock of the types suited to the market should be kept and from which practical demonstrations could be made. Theo. Albers, rue Basse, Ghent, is in a position to conduct an agency, and solicits correspondence on the subject.

LIBERIA.

BOATS ARE NEEDED FOR RIVER TRAFFIC.

Consul Lyon, of Monrovia, reports that from the physical aspect of the country, as well as the natural contour of Liberia's coast line, motor boats would supply a long-felt need in sections which are entirely without facilities for communications except those of the traditional canoe. He writes:

Liberia has a coast line of 500 miles, which is divided into four counties and one territory, each of which is intersected by many streams. Most of these are navigable only up to a certain distance, and that distance must be covered by a small boat. The country, therefore, offers an inviting field for the American motor-driven boats. There are about four of these boats in service upon the St. Paul River, the principal river communication in Montserrado County. The service of these boats has already completely revolutionized the traffic of the river by forcing out the old-fashioned canoe.

The Southwestern Christian Advocate, a religious journal of the Methodist Episcopal Church, published in New Orleans, La., has opened a subscription among its patrons for the purchase of a steam launch, to be used in Liberia by Bishop I. B. Scott, the representative of the missionary society of the church in Liberia. The boat is intended to facilitate communication not only between the river settlements and Monrovia, but also between the settlements on the seacoast from Cape Mount to Cape Palmas. The largest boat now used here measures about 50 feet in length and 12 feet beam, with a propelling force of 15 horsepower. It is constructed so as to be able to use either gasoline or kerosene oil. The latter, however, has the preference.

The Republic of Liberia, in its present state of development, is ripe for a trade of this kind, and American manufacturers should enter into the competition with England and Germany for a supply of these crafts.

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AUTOMOBILES.

THE EMPIRE OF RUSSIA.

AN ENCOURAGING FIELD FOR AMERICANS.

CHARACTER, EQUIPMENT, AND PRICE OF MACHINES NEEDED.

According to expert evidence published in the "Nachrichten für Handel und Industrie," Berlin, Germany, natural conditions in Russia are both favorable and unfavorable to the automobile trade. The favorable ones are found in the absence of many hills and the long distances over level stretches. The unfavorable are found in the long winters, the intense cold, and the absence of romantic places or scenery to attract tourists. The people and public officials do not favor this method of getting over the ground. They are poor sportsmen. The people have little skill in handling complicated machinery, hence the inability to get chauffeurs on reasonable terms. The country folk are often bitter enemies of the automobiles, the roads of the empire are often wretched, and the network of ways far from what it might be and what it will have to be before Russia can count on a very successful industrial or commercial career.

In the cities it is different. There everything favors the automobile. The slowness with which street railways are built forces many families to keep carriages. These will doubtless turn to automobiles. The only serious obstacle to a rapid development of the automobile trade in the large cities is based on police supervision and regulation. Now that a great change has come over Russia's police and other policies trade in automobiles may develop unmolested. The different cities, however, have each its own ways of handling the automobile traffic. St. Petersburg and Moscow long since recognized the automobile as a necessity, hence their regulations are comparatively liberal. Riga and other cities have been rather severe. In those places certain streets may not be traversed by the autos. Applications in writing for permission to use an automobile must be made and the machine must be subjected to expert investigation.

NUMBER OF MACHINES IN USE.

Up to date Russia, including Poland, the Caucasus, and Finland, has from 1,200 to 1,500 automobiles, among them many of the lighter kind. Besides these there are fully 1,500 automatic bicycles. Any one interested in discovering the actual conditions governing automobiles and the automobile business in Russia will do well to go over the ground carefully in every large city from St. Petersburg and Moscow down to the smallest place in which sales are to be sought. The farther the Empire emerges from a mere agricultural country to a position among the industrial and commercial states the automobile business is bound to grow. A long time will pass before the country

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will be able to build as great a network of railroads as is found in other parts of Europe or in the United States. Nor will they be as necessary, now that so convenient and pleasant a method of transportation is available. The men who own the mines and forests will want automobiles, for in the long run they will be found far superior to horses, for these latter call for great care and entail enormous expense.

MANUFACTURING AUTOMOBILES.

Nobody has done much about building automobiles in Russia. A St. Petersburg firm that built motor boats tried its hand at the automobile. Another firm is now doing what it can to introduce the manufacture of autos on the basis of a well-known American make, also one resembling a well-known German type. During the season of 1905 this firm turned out 30 machines. The warm weather is practically the only time during which the automobiles may be run in Russia. Some firms buy all the parts abroad, limiting themselves to the work of putting them together.

EQUIPMENT REQUIRED.

The writer in Handel und Industrie, from whom most of the foregoing was taken, says the peculiar needs of Russia in regard to these machines has never been met. The comparatively great success of the American type, he thinks, was due to cheapness, abundance of supply, skillful advertising, etc. Simplicity of construction and driving are the prime requisites. The simpler the machines the better. If a machine is ever built to meet Russian ideas, it will have to be strong, so as to go safely over bad roads. Great speed is not required because of the danger from bad roads. Low transmitters are wanted because of steep hills and bad places that require the machines to go slow. The springs must be stronger and longer when possible than they usually are. They should be provided also with shock receivers. Strong axles and crank shafts are desirable; in fact, those are practically indispensable. Only large-sized pneumatic tires will be acceptable on the wheels. The space between the bottom of the body of the machine and the road must be considerable, so as to avoid shocks from obstacles. The gauge or distance between wheels must be somewhat narrow, because of the narrow, almost pathlike, road over which the machines have to pass, particularly in the country. (The 4½ P. S. Dion wagon or machine is said to be a suitable standard for Russia's roads.) It must have props, brakes, etc., for the hills. The water tank must be easy to empty, and in a short time and to the last drop, otherwise the autos could not be used in Russia's winters. For the same reason the gas generator must be able to take up warm air. The machine must be as noiseless as possible. For trips into the provinces the only machines that are worth anything are those that carry a large supply of benzine and have electric-magnetic ignition, for supplies may not be easily renewed and accumulators can not be loaded up. The seats should be wide and comfortable, and the machine should have a top covering to guard against wind, sun, and rain.

SIZE AND PRICE.

It is hard to find out just what sizes and prices should prevail. Russia is rich only in resources. Her available wealth is comparatively small.

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Her people have no such huge sums as Americans and others to put into luxuries like automobiles. It is only by duly recognizing actual conditions that merchants and manufacturers seeking outlets for their goods in Russia will be able to realize fair, never fabulous, profits. First-class goods go fairly well only in large cities like St. Petersburg and Moscow. For these fairly large prices will be paid, as there are people in those cities to whom four or five thousand dollars mean no more than to people in the large cities of the United States. One thing is possible, and for that all parties seeking sales in Russia must be prepared, viz, a demand not only for credit, but for long periods of credit. In the automobile business cash payments have prevailed in the past simply because the purchasers have been persons of great or considerable wealth. The best-informed parties say that the machines that will sell best will run between $1,000 and $2,000 apiece.

The United States will have to meet French and German makers in Russia's markets. How much that means or may mean the manufacturers understand. It is the purpose of this paper, particularly at this point, to suggest lines along which the success of the past may be materially augmented. At present American makes are the favorites. This the Germans admit. A writer in the Nachrichten fur Handel und Industrie says "the rapidly acquired popularity of the American machines, on the Russian market only since 1903, may be regarded as only a passing episode," etc.

ADVANTAGES OF HEAVY MACHINES.

The French, with their elegant forms and splendid productions, winning their way to a profitable and permanent place at home and in other parts of Europe, suffer in Russia because of bad roads. Here it is that the German's solid, strong, heavily built machines have the advantage. Once the world learns that the American made machines, with their wonderful steel parts, will stand more than the heavy, clumsy creations of European rivals, increased sales are certain. The German writer already referred to urges his people to do nothing for a foreign field that will lead to the neglect of the home market, but to be sure to do nothing that will lead to the neglect of the foreign fields, for these will be profitably worked in the near future. Any attempt to find a market or to force sales in Russia during a depressed period at home must be preceded by the sale of most excellent machines in Russia in recent and immediately preceding years. No one who is wise will look for large sales in Russia now. The best basis to build on is a steady market, and that is to be secured only by the most careful study of conditions and by conforming to its demands. Care must be taken as to terms. These must be explicit, well explained, and well understood. The time of delivery must be definitely held to and the forms of advertising must be as near perfect as possible. Catalogues, circular letters, etc., in any language than Russian are of little or no value. German and French are preferable to English, but all are bad.

STOCK TO BE KEPT ON EXHIBITION.

If possible, a fairly large stock to select from should be in the large trade centers. This is true of automobiles and motor boats. Russia does little or no business based on price lists. Her people like to see,

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feel, and examine what they buy. If one can not establish a branch of his own house, he can and should put a machine or two in the hands of a reliable commission house. The successful American machines have aroused Europe. The success achieved was won by fine forms. Real success is sure if one only finds out and follows Russian needs. If one firm finds itself financially unable to carry stock, etc., two, three, four, or five might combine. One firm might send a heavy or big machine, another a middle weight, a third a light weight, etc. At any rate, whatever is done the field is worth working. And what is true of Russia is true of many parts of the world. The purpose of this report is to point out the possibilities for the automobile trade in fifty parts of the world by detailing somewhat the conditions, needs, etc., of Russia. Relatively speaking, the conditions are the same. What applies there is true elsewhere.

COMBINED ACTION SUGGESTED.

Perhaps a better plan than the one suggested in the foregoing would be for firms making agricultural instruments, paints, etc., to unite with automobile manufacturers, motor-boat builders, furniture makers, etc., to open large display and sales rooms in St. Petersburg, Moscow, Odessa, Riga, and other points in Russia. Indeed, this policy should be carried out in all countries and in all parts of the world; for, again, what is true of Russia in this respect is just as true of the Orient, South Africa, and South and Central America.

The following is a list of firms in Russia dealing in automobiles:

St. Petersburg: Automobilclub, Nevsky, 108; "Pobjeda," Tanski & Co., Moika, 61; Freese & Co., Ertelew Per., 10; A. M. Fokin, Troizka; Emil Braun, Kamennoostrowsky Pr.; "Polytechnik," Troizkaja; Hoffmann, Kleine Dworjanskaja, 19.

Moscow: Automobile Club, G. Schemlitschka, Mjassnizkaja; Aktien Gesellschaft "Dux;" "Express" Neckarfulm, Banzhaf & Co.; Handelshaus Pochilsky, Twerskaja; Aktiengesellschaft "Enfield," Roshdestwenskaja; I. Block, Kusnezky Most.

Riga: A Leutner & Co., Alexanderstr., 129.

Odessa: M. Asnach, F. Zorn & Co.; A. Reno; J. Glats & Co.

Saratof: R. Ehrt.

Warsaw: International Automobile Agency, Leschno, 25; Kowalsky & Trylski, Mjodowa, 4; Maison Ormonde; B. Wahren.

Kief: E. Torkler.

Kharkof: S. L. Popow, Usowskaja, 9.

Novorossisk: F. Burkhardt & Co.

CHINA.

STEADILY GROWING MARKET.

AMERICAN MACHINES FIRMLY ESTABLISHED—ADVICE TO MANUFACTURERS AND SHIPPERS.

Special Agent Burrill furnishes an interesting letter on the introduction and sale of automobiles in China. The trade to this time has not been very extensive, but is likely to become so. The American machine seems to be firmly established by reason of its superiority

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over those of other countries. Mr. Burrill furnishes advice to manufacturers with regard to packing and shipping which should not be overlooked. His letter follows:

China presents a steadily increasing market for automobiles, and the sale of machines of American make has kept pace with the demand. While the purchase of cars to this time has been confined almost exclusively to the foreigners of Shanghai, the wealthier Chinese now regard this mode of travel with especial favor; and as they are well able to afford the luxury, it is safe to assume that the demand will soon extend to them. Chinese drivers of automobiles are the rule rather than the exception here, and this familiarity of the natives with the running of the machine, its speed, comfort, and utility, is assisting materially in influencing the Chinese in its favor. The roads in and around Shanghai are macadamized and kept in excellent condition by the municipal authorities, money is abundant, and conditions are generally favorable to the extension of the automobile business.

In 1900 six or eight steam machines were imported from the United States, but none of them was sold. In 1902 three Oldsmobile runabouts were imported and disposed of, and the next year two French gasoline sliding-gear cars were brought over. These machines were of the runabout type and were fitted with De Dion vertical single-cylinder engines. A marked increase in the number of cars imported was noticeable in 1904 and 1905, while there has been a greater demand for higher-power machines. Several 10, 16, and 20 horsepower machines have been sold, and have given good satisfaction. There have been only two English cars of any description imported, and one of these was returned because of its unwieldy size. The comparatively narrow streets of the foreign settlement in Shanghai make the operation of the larger type of cars difficult, if not dangerous.

While American machines are firmly established on the market and have repeatedly demonstrated their superiority over cars made in other countries, it would be well for the manufacturers of the United States carefully to observe the suggestions which are regarded here as essential to the increase of the sale of American automobiles. These may be summarized under four general heads, and all are necessary to the successful development of trade in this particular line:

1. Manufacturers should give prompt attention to filling and shipping orders. Unnecessary delays frequently occur which furnish additional cause for criticism of American carelessness and indifference to the demands of the export trade.

2. Any misrepresentation as to the time of shipment should be scrupulously avoided. Manufacturers should forward the machine on the date promised, as any excuse, although it may be fully warranted by conditions, will be regarded here with suspicion. This is the unfortunate, though unavoidable, result of previous experiences when the shipment of other commodities has been delayed beyond all reason.

3. Close attention should be paid to the details of the shipment. No car should leave the United States unless its equipment is complete. This caution becomes all the more important because several instances are cited where a machine has arrived in Shanghai and when unpacked discovery was made that the starting handle, crank, or some other essential part had been forgotten. This kind of carelessness occasions a long, unnecessary delay and natural irritation on the part of the purchaser.

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4. Freight rates on automobiles are high, both by San Francisco and the Suez Canal, and while it may be difficult to procure any reduction because of the comparatively limited number exported to the Orient, it is suggested that some action be taken, in the interest of the trade here, looking to cheaper transportation.

The foregoing recommendations were made to the writer by men here who have carefully studied the situation, and who believe that if they were faithfully carried out a decided improvement in the business would follow.

The American method of packing automobiles is commended in Shanghai and is regarded as superior to that of any other country. The wheels are always removed from the body of the machine, and usually the axles, steps, and steering gear as well, which are packed separately. This is a decided advantage, as it not only insures greater safety to the car in transit, but decreases the cubic measurement of the case for shipment.

Although the freight rates on automobiles from the United States to Shanghai are regarded as too high by the dealers here, yet they compare favorably with those from other countries. Insurance rates, however, are slightly higher. The freight and insurance charges on a car laid down in Shanghai amount approximately to $50 gold. The warehouse charges here are the same to all countries exporting automobiles to Shanghai, and are comparatively unimportant, as the machines are usually removed immediately on arrival. A customs duty of 5 per cent on the invoice valuation of the car, including freight and insurance to Shanghai, is collected. In Shanghai there are now established two garages, or, more properly speaking, repair shops, and a third is soon to be erected. There is also a club known as the "Automobile Club of China," which was organized in May, 1905, and already has a membership of 22.

The New York Export and Import Company and a French firm are the only business houses in Shanghai dealing in automobiles, but both regard the outlook for trade in this particular line as bright and worthy of encouragement. While the price of a machine laid down in Shanghai must not be excessive, as compared with its cost at home, with due regard, of course, to the additional expenses incidental to importation, the margin of profit is sufficiently large to make the business satisfactory to the dealer.

GERMAN EMPIRE.

INTERNATIONAL EXPOSITION AT BERLIN.

PLANS FOR AN INTERNATIONAL GATHERING—INDUCEMENTS FOR EXHIBITORS.

Consul-General Thackara, of Berlin, reports that an international automobile exposition will be held in Berlin from the 3d to the 18th of February next, under the auspices and joint control of the German Automobile Club of that city, and the Association of German Motor Vehicle Manufacturers. Consul-General Thackara writes:

The committee of management, of which the Duke of Ratibor is the chairman, is composed of members who are distinguished repre-

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sentatives of the varied interests of Germany, in the manufacture and use of motor vehicles for the purposes of sport, travel, and transportation, and whose names are a sufficient guarantee that the exposition will be managed upon liberal, intelligent, and up-to-date principles. It will be held in the Landes Austellungs Park near the Lehrte Railway Station, within easy access to all parts of the city, in a building admirably well adapted for the purpose. The floor space under roof is 12,000 square meters in extent, all on the same level, with all the principal rooms lighted from above, and so spacious as to fulfill every requirement in that respect,

PRIVILEGES OF EXHIBITORS.

No prizes will be awarded, but exhibitors will be permitted to sell all or any part of their exhibits during the exposition. Deliveries, however, cannot be made until after the close of the display without the written consent of the committee of management. The exhibition will be divided into five sections, viz:

1. Motor cars for the transportation of persons, also for sanitary, fire department, and military service.
2. Motor vehicles for industrial purposes.
3. Motor cycles.
4. Motor boats in so far as the size and conditions of the exhibition space may be adequate and adaptable to such exhibits.
5. Parts and accessories of motor vehicles, including wheels, tires, lanterns, automobile clothing, literature pertaining to the use of automobiles for sport, travel and transportation; drawings and touring maps.

The rent for floor space will be at the rate of 30 marks ($7.14), and wall space 25 marks ($5.95) per square meter. For outdoor exhibits space will be charged for at the rate of 10 marks ($2.38) per square meter. After December 15 next, according to the exposition regulations, the rate for space may be increased. At my request, however, the exposition authorities have waived this provision, and have assured me in writing that Americans who wish to exhibit will not have to pay higher prices than the rest of the exhibitors and will be assigned the most desirable spaces which may be left when the applications are received.

GOOD FIELD FOR AMERICANS.

In view of the popularity of the American "runabouts" and electric carriages, the great demand for motor vehicles for industrial purposes, and the decided improvement which has been shown in the construction of the higher grades of American cars, the Berlin exposition will be a good field for our American manufacturers to bring their products before the German public, and possibly to establish a lucrative and permanent outlet. In all probability America will be well represented at the Paris automobile exposition, which takes place at the end of December; it may therefore be practicable for the same exhibits to be used for displaying at Berlin. All correspondence and applications for space should be addressed to Managing Director Freiherr von Brandenstein, No. 16 Leipziger strasse, Berlin, W. Germany.

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THE EAST INDIES.

STEADY EXPANSION OF THE TRADE.

MIDDLEMEN ARE AN OBSTACLE—STYLES AND PRICES.

Vice-Consul Piatt, of Dublin, forwards an article which appeared in a recent issue of the Moniteur Officiel du Commerce de Paris on the motor trade in India, which will interest those engaged in that industry in that country. Complaint is made that the French manufacturers of motors in their dealings with India employ English agents, and that these agents naturally discriminate against all makes in favor of those of Great Britain. What is said about the style of cars adapted for India should be carefully noted by manufacturers. The article follows:

During the last two years motor cars and motor cycles have been used in such rapidly increasing numbers in Calcutta, Bombay, and Madras that several French firms, having consulted their consul-general, are now taking steps to open a vigorous campaign. Already Calcutta possesses an essentially French garage and depot. The traveler of another firm, being convinced of their utility, has consigned a large number of motor cycles to another Calcutta agent, while the representative of a third French firm is studying the possibility of the general use of motor boats on the delta of the Ganges. All are agreed that the reliability trials which have been organized have demonstrated in no uncertain manner the value of motor traction and considerably hastened its development. During the fiscal year 1904–5, 128 cars entered Calcutta, in spite of the fact that Bombay is a much more favorable port of entry. From the rapidity with which the cult of the bicycle has spread throughout India, it is reasonable to predict a similar expansion for motor cars. The native is no opponent of progress. He has accepted the change from oil lamps to electricity without the least sign of fear or hostility. He does not analyze matters, but profits without questioning from labors the magnitude of which he is totally ignorant. In short, he is a fatalist whom nothing can astonish, but he is quick to see the advantage of the motor and to familiarize himself with its working. Thus there are already in Bombay garages hiring out cars, and it appears these never lack work.

BRITISH MIDDLEMAN MUST GO.

It has been generally agreed that the French industry must be freed from the "middleman"—the English agent—who, while offering great advantages from the point of view of security of payments, naturally presents grave obstacles to the furthering of the sales of French-made cars in India. At present our principal makes are only for sale through English agents, who hold a monopoly for England and the British colonies. These agents, thus privileged by French makers, are free to sell other makes, and are naturally tempted to offer the latter in preference to French machines, on which their profits are less.

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STYLE OF CARS REQUIRED.

Cars for India must be built as high as possible, in order to clear obstacles on the road and to be usable across fords and overflooded roads, which are very common during the rainy season. Engines with fly wheels a few inches above the ground would be utterly useless. Secondly, the carriage work must be light and strong, and the engine and gears simple and easily accessible. Thirdly, the price should be from $900 to $1,250, and the cars should be exhibited at a centrally situated garage; and every opportunity given to likely customers to thoroughly examine every detail. Speed is apparently quite a secondary consideration.

The following are the firms whose cars have at present the best sale: London Motor Cab Company, De Dion Bouton, Humber, Thornycroft, Wolseley, Oldsmobile, Minerva, and Panhard Levassor. Over one hundred Oldsmobiles were sold in Calcutta last year.

NEW ZEALAND.

A GOOD OPPORTUNITY OFFERED.

AMERICAN AND FRENCH MACHINES LEAD THE MARKET.

Vice-Consul Piatt also forwards a clipping from a recent number of The Motor, a representative trade paper published weekly in London. The publication in The Motor is in the form of a letter from Messrs. Mayes and Langdown, of Christchurch, New Zealand, in which they lament the fact that owing to the neglect of British manufacturers the trade in motor machines is principally in the hands of the Americans and French. The writer says:

Regarding the present aspect of the motor business, what is the position to-day in New Zealand? The Americans and French may fairly claim to hold the market—De Dions, Darracqs, Decauvilles, Oldsmobiles, Cadillacs, Ramblers, Locomobiles, Fords, Wintons, Minervas, and Orient Buckboards, with here and there an occasional Swift or Wolseley. In Christchurch, at a recent motor gathering of 52 cars, only 6 per cent were of British manufacture, and this in a British colony and protected with a preferential tariff. It leads one to suggest either that British cars are inferior to the foreign-made goods or their system of doing business is radically wrong. We incline to the latter theory. Let us look into the prospects of trade in New Zealand. It is quite safe to assert that 400 automobiles will be imported during the next twelve months. We know of one contract for a supply of 85 American cars; and what steps are English manufacturers taking to secure their share of our trade? We can positively assure the British manufacturer that colonials would much prefer to purchase British-made goods, but, owing to so few being stocked, they have either to run the risk of importing a car they have never seen or relying implicitly upon the word of the American.

And now for the remedy. A brilliant opportunity presents itself at the forthcoming Christchurch exhibition to be held in November,

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1906. It would be well to suggest that British manufacturers combine and send samples of their best cars and so establish their claim. There are plenty of good firms here who would be only too willing to take charge of any cars sent, and would see justice done to the exhibits.

BELGIUM.

ANNUAL VALUE OF TRADE.

Consul McNally, of Liege, furnishes a report on the value of Belgium's trade in automobiles, motor cycles, and bicycles from 1901 to 1904. In 1901 the total value of these machines exported was $542,428 and in 1904 $1,316,035, an increase of nearly $800,000 in four years. The value of automobiles advanced from $192,000 to $437,000, and motor cycles from $70,465 to $660,538. It appears that the exports were twice as much as the imports. In 1901 the total value of imports was $369,000 and in 1904 $669,000. It appears from the tables furnished by the consul, that in four years the exports of bicycles fell from 3,529 machines to 713, while the imports advanced from 2,967 to 5,417 in the same period. The exports of motor cycles advanced from 134 to 2,393, while the imports increased from 49 to 136. Germany is the principal competitor, as that country sends in a cheaper machine than the Belgian manufacturers produce. Of the 5,417 machines imported into Belgium in 1904, 3,784 came from Germany, which is about 70 per cent of the total. The Belgian manufacturers complain also that the duties of the various countries are almost prohibitive, while the Belgian duty is but 12 per cent ad valorem.

AGRICULTURAL MOTOR.

SUCCESSFUL EXPERIMENTS WITH PARAFFIN.

Consul Walter C. Hamm sends from Hull the result of an experiment in applying motor power to farm work. It will be of interest to small farmers who can not use agricultural machinery and motive power on a large scale profitably. The following account is condensed from a letter printed in the London Standard:

I have been conducting some experiments recently in regard to the use of alcohol on the Ivel agricultural motor. Some months ago I was able to arrange a simple attachment whereby paraffin could be utilized for the running of the motor, which was originally designed for petrol, and was able to secure satisfactory results—that is to say, it is possible either to start up on petrol and after five minutes' running to turn on paraffin and run on the same for the rest of the day, or in case it is impossible to obtain petrol it is possible for me to start up in paraffin and run on continuously. This is accomplished without the slightest trouble in regard to sticking up of valves or fouling of the engine.

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OPERATING EXPENSES.

One of the most important points in connection with motors for agricultural purposes is the fact that they should be run cheaply, that the the upkeep should be small, and the running expense light. Therefore the question of fuel consumption and the cost of same is very important. Petrol at the present time is expensive. It is easy for a wealthy owner of a car used for sporting or pleasure purposes to buy petrol without feeling in any way that it is a burden to his pocket. At the same time, to the agriculturist using his machine only to help him with his work the expenditure is an important one. Therefore the first step I took was the utilization of paraffin, which can be obtained at one-half the price of petrol. This shows a decrease in the running expenditure of one-half for fuel, and at the same time does not carry with it the many risks which are bound to occur through the storing and handling of petrol, which is of the highest specific gravity.

ADVANTAGES WITH PARAFFIN.

It is a clean spirit to handle, and has many other advantages. Therefore, following up my experiments, I used alcohol for the third fuel tests, and may say that the same have been attended with most successful results; the same machine with the same carburetor, with a very small attachment, and with no alteration to it making it different from when it is running in petrol, gives nearly the horsepower and the same pulling results. The consumption is practically the same, and I feel that I have to congratulate myself on having carried out experiments so successfully on a fuel which has up to the present time baffled most of the motor engineers in so far as its successful use is concerned. The following results have been achieved with the three fuels, running the same machine on the same oil, and, in fact, the experiments were carried out on the same day:

With 2 gallons of petrol 3 roods of land were plowed.
With 2 gallons of paraffin 2 roods 35 poles were plowed.
With 2 gallons of alcohol 2 roods 25 poles were plowed.

These results are very interesting as showing that there are many possibilities in connection with the motor vehicle which have not been worked out.

Consul-General Chester, of Budapest, reports that the firm of Moritz Biró, VI, Izabella utcza, 63, Budapest, desires to import American faïence and cast-iron bath tubs, bathroom gas stoves, and sanitary-technical and sanatorium goods of all kinds.

Consul Stephens, of Plymouth, furnishes an address delivered by Mr. E. J. Allen, secretary of the Marine Biological Association, on the best means of extirpating dog-fish, which are a great pest on the American as well as British fishing coasts. This matter has become so serious that the fishermen of southwest England have made strong representations to the British Government to enable the board of agriculture and fisheries to deal with the subject, which is regarded as a national one and of great importance.

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CAMPHOR.

CLOSE MONOPOLY BY JAPAN.

GOVERNMENTAL CONTROL OF PRODUCTION AND SALE.

STANDARD OF PRICES AND QUALITY FIXED BY THE GOVERNMENT—ANNUAL OUTPUT.

Consul Fisher, of Tamsui, Formosa, furnishes an instructive report on the production of camphor in that country under the monopoly established by the government for its control. Standard of quality and prices are fixed by the government, and private parties who are given the privilege of refining are required to conduct their business under governmental regulations. The report follows:

On August 5, 1899, the camphor industry of Formosa was placed under government monopoly. The chief reason for this action was to increase the revenues of the government. Other reasons were to raise the standard of quality of camphor manufactured, to regulate the production with regard to future supply, and possibly to give the government a more free hand in carrying out its policy toward the savage tribes in whose territories practically all of the remaining camphor forests exist. The conditions under which the monopoly has been conducted since it was created, so far as the manufacture of camphor is concerned, are as follows:

Persons wishing to engage in the manufacture of camphor in the forests are required to obtain permits from the government. They must furnish an estimate of the amount of camphor they expect to produce during the ensuing year, which must be of a quality not below a certain standard fixed by the government. All of the camphor, as well as camphor oil, produced must be sold to the government at prices fixed by it, according to the fineness of the product. Besides accepting deliveries at its main office at Taihoku, the monopoly bureau at first established stations throughout the camphor districts, at which the camphor was accepted from the manufacturers. For camphor delivered at one of the stations a sufficient amount was deducted to cover the cost of transportation to Taihoku, and the loss in weight that would result while in transit.

PRICES AND PRODUCTION.

The schedule of prices for crystallized camphor per picul in yen paid at the different stations was fixed as follows:

Station.	Crystallized camphor.			Camphor oil.
	First grade.	Second grade.	Third grade.	
	Yen.	Yen.	Yen.	Yen.
Taihoku	30.00	27.00	24.30	15.00
Shinchiku	29.00	26.10	25.56	14.50
Byoritsu	27.00	24.80	22.30	13.80
Taichu	26.00	23.40	21.10	13.00
Toroku	22.00	19.80	17.80	11.00
Rato	27.50	24.80	22.80	13.80

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In the early part of 1904 a readjustment of the schedule of prices was made by which it was intended that the Government should stand the cost of transportation from the outlying districts, while the manufacturer would still bear the loss in weight while in transit. Under the schedule then arranged, which is now in vogue, all deliveries were to be made at Taihoku. The prices were fixed as follows per picul:

District.	Crystallized camphor.			Camphor oil.
	First grade.	Second grade.	Third grade.	
	Yen.	*Yen.*	*Yen.*	*Yen.*
Gilan, Shinko, Toshien, Shinchiku, Byoritsu, Taichu, Nanto, and Toroku	30.00	27.00	24.30	15.00
Kagi	31.00	28.00	25.30	15.50
Banshoryo and Ako	32.00	29.00	26.20	15.90
Taito	32.70	29.70	27.00	16.30

One picul equals 133⅓ pounds. One yen equals $0.498 U. S. currency.

The Government supplies to the manufacturers two sizes of canvas bags, one-half picul and 1 picul, in which the crude camphor is shipped to Taihoku, where, if it is to be exported in its crude form, it is well packed in zinc-lined cases or tubs holding about 1 picul. The monopoly bureau has a factory at Taihoku for cleaning and pressing such as is to be exported in a semirefined state, which consists of redistilling and compressing into blocks weighing 10 kin (13⅜ pounds). Ten of these blocks are packed into a zinc-lined case. A very small proportion of the camphor is now exported in the semirefined state. When packed the camphor is marked and turned over to the sole selling agents. Although the Government factory is equipped for extracting camphor from the oil, the most of it is delivered to private refineries in Japan, which, under an arrangement with the monopoly bureau in Formosa, extract the crude camphor and deliver it to the bureau's branch office in Kobe. The oil is supposed to yield about 49 per cent of crude camphor. The residual oils are used in the manufacture of disinfectants, perfumes, soaps, etc.

CONTRACT FOR SALE OF THE DRUG.

As regards the sale of the camphor, the monopoly bureau in the early part of 1900, after inviting tenders from the foreign and Japanese firms desirous of obtaining the sole selling agency, awarded the contract to Messrs. Samuel Samuel & Co., a large British firm, the term of which was for three years, and the general conditions were: The holder of the agency was to place with the Government a guaranty of 1,900,000 yen, which was permitted to be in the form of Government bonds bearing interest; he was to conduct the sale of the camphor at London, Hamburg, New York, and Hongkong, and must be prepared to accept from the Government from 30,000 to 50,000 piculs of camphor a year. The Government reserved the right to sell to private persons, other than the sole selling agent, camphor for use of the Government, and also as raw material for the purpose of manufacture in the Japanese Empire. The camphor was to be of two grades—"A," to be known as cleaned and pressed, and "B," which is the camphor in its ordinary crude form. So far as possible, the agent was to send such quantities of camphor to the leading markets as would be necessary to supply the demand.

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The prices to be asked for the drugs abroad were as follows: For "A" grade in 10-kin blocks, for London, Hamburg, and New York, 107.843 yen per picul, exclusive of import duties, if any; and for Hongkong, 102.378 yen. For the crude camphor 99.702 yen was to be the price abroad. The Government was to receive from the selling agent 85 yen per picul for the crude and 94.323 yen per picul for the "A" grade.

APPEAL TO THE MONOPOLY.

When the monopoly in Formosa was created the camphor industry in Japan had almost ceased to exist, as the trees easily available had been exhausted. With the advanced prices set by the monopoly the manufacturers in Japan found that they could produce camphor from the trees, even though difficult of access, sell it at prices considerably under those of the monopoly, and still realize a good profit, so that the industry there quickly revived. The annual production, which in 1899 amounted to but 1,416,260 pounds, was increased to 2,190,175 pounds in 1900, to 2,669,292 pounds in 1901, and to 3,396,908 pounds in 1902. Moreover, at the time of the enforcement of the monopoly large stocks of camphor were held in Formosa by private persons, with the disposal of which the Government did not interfere. While Japan's production was capable of supplying but a portion of the world's demand, the selling agent found that it would be impossible to maintain the monopoly's original prices and dispose of the whole of the amount stated in their contract. The monopoly was therefore appealed to for a rearrangement of the terms of sale, which was granted.

This was in the latter part of 1901. In the meantime the selling agent had acquired large stocks. As the Formosan government had depended upon the profits of the camphor monopoly for a part of its revenue it was necessary that some steps should be taken to relieve the situation, and with this in view a bill emanating from this Government was submitted to the Imperial Diet in 1902, the object of which was to give the monopoly bureau of Formosa an indirect control over the production and price of the Japanese article. Owing to a technicality the bill did not pass that Diet, but it was plain that some such bill would be passed at its next session. During the season of 1901-2 there was a large production in Japan. The monopoly's prices were forced downward until in June and July crude camphor was sold abroad at 135 shillings per hundredweight (112 pounds), but by the first of August most of the Japanese production had been exported. From that date the monopoly was enabled to raise its prices and by the end of the year crude camphor stood at 160 shillings abroad. The bureau had during that year reduced its receipts from the manufacturers to nearly 1,200,000 pounds less than those of the preceding year.

PRICES FORCED DOWN.

The next season's (1902–3) production in Japan again forced the monopoly's prices downward. In July, 1903, it delivered crude camphor abroad at 150 shillings. In the meantime the 1903 session of the Imperial Diet had passed a bill placing the industry in Japan under Government monopoly, which was to be enforced from the 1st of November of that year, and as the largest part of the Japanese production had been disposed of by August, the monopoly's price for crude delivered abroad was raised to 155 shillings per hundredweight during that month. In March of 1904 the price advanced to 162 shil-

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lings 6 pence; in September to 166 shillings, and in April, 1905, to 175 shillings, where it stands at present. While the camphor monopoly bureau in Japan is independent of the bureau in Formosa, they both exist under one law, and the prices and production are regulated in unison.

PRODUCTION AND EXPORTATION.

In the summer of 1902 some of the importers of camphor in Europe and America evidently perceived the course that the conditions were shaping and undertook to increase their stocks. The exports of camphor from Formosa and Japan in 1901 amounted to but 6,717,319 pounds; in 1902 they amounted to 9,328,399 pounds; in 1903 to 8,965,568 pounds. In the latter part of 1903 the stocks held by the selling agent had become exhausted, and from that time the demand for crude camphor was compelled to depend for its supply upon the immediate production, which for 1904 was considerably less than the estimates. The total production in and the total exportations from Formosa and Japan during the years from 1900 to 1904, inclusive, are shown in the table below:

Year.	Formosa.	Japan.	Manufactured at Kobe from oil.	Total production.	Total exports.
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
1900	4,511,184	2,190,175	.....	6,701,359	6,469,229
1901	1,725,348	2,669,292	1,635,257	9,029,897	6,717,319
1902	3,676,060	3,396,908	1,513,795	8,586,763	9,328,399
1903	4,971,628	2,948,585	1,613,851	9,534,064	8,965,568
1904	4,519,923	900,000	1,979,137	7,399,060	7,392,343

PRIVILEGES FOR PRIVATE REFINERIES.

At the time of the enforcement of the camphor monopoly in Japan a number of private refineries were in operation there. Instead of taking over their properties and granting compensations, the Government permitted them to continue operation, and arranged to allow them a certain amount of crude camphor for refining, the product of which they are allowed to dispose of either at home or abroad. I am informed that the amount allowed them is 8,000 piculs, or about 1,067,000 pounds, a year. This is manufactured chiefly into tablets for export. The price at which the crude camphor is turned over to these refineries is not given out, but from figures furnished in the customs returns of Formosa I am led to believe it is about 90 yen per picul. At any rate, it is considerably less than the price of crude camphor delivered at New York, minus freight and other charges, and they are enabled to export their products to the United States in competition with the refineries in America.

At the expiration of the contract on the 31st of March, 1903, with Messrs. Samuel Samuel & Co., a private agreement was made with the same firm for another period of three years, the terms of which have not been disclosed, but the principal changes made appear to be that ths prices were to be regulated according to supply and demand. Base prices were to be fixed by the Government, but the selling agent was to be allowed to reduce these prices by not more than 2 shillings per picul. The old arrangement of maintaining the same prices for deliv-

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ering at London, Berlin, and New York was abolished, so that buyers in New York were allowed the advantage of the lower freight rates to New York than to Europe. After the monopoly was enforced in Japan the selling agent also undertook the disposal of the product there. The present contract will expire on the 31st of March, 1906, but it will probably be renewed with the same firm.

GRADES AND DISTRIBUTION.

The Government at present puts up three grades of camphor, the "A" grade, which is practically a refined camphor; the "BB," which is about 97 per cent pure, and the "B," which is about 95 per cent pure. The "A" constitutes only about 6 per cent of the total exportation. The proportion of the "BB" is somewhat larger than that of the "B." The American market is supplied almost wholly by the "B." In order that camphor might be distributed to the different markets without partiality the Formosan Government endeavors to apportion the exports to the different countries according to the proportion that each received at the time the monopoly was enforced, which was somewhat as follows: Germany, 37 per cent; America, 33 per cent; France, 15 per cent; Great Britain, 10 per cent, and India, 5 per cent. Recent investigations as to the supply of camphor trees in Formosa have shown that with the present system of afforestation there is no probability that the material will ever become exhausted, even though the demand for camphor should continue to increase. Vast forests in the south yet remain untouched, and it is now known that the supply in the savage districts of the north is much larger than was at first estimated.

MANUFACTURE OF CELLULOID.

The question of manufacturing celluloid in Japan has been under consideration for some time, and that industry will probably be undertaken before many years. It appears to me that if such a thing be possible users of camphor in the United States would find it to their interest to arrange for their future supply by afforestation in localities, either in our island possessions or in the United States, adapted to producing the drug, if they expect to continue their business far into the future. While the camphor industry in Formosa has an advantage in cheap labor, it has disadvantages in the inadequate means of transporting the material from the forests and in the necessity of maintaining a large force of guards for protecting the workmen from attacks by savages, neither of which will be overcome for many years. I am informed that recent experiments in extracting camphor from leaves and twigs of the camphor tree have shown that the drug can be economically produced by that method, and that the monopoly bureau here intends to apply this method as soon as the trees planted a few years ago have reached their seventh year. However, the amount produced in this manner will be a small proportion of the total production.

PRICE OF CAMPHOR WILL NOT BE ADVANCED.

From an indirect source I am informed that the Formosan government does not intend to advance the price of crude camphor during the next year. I am unable to confirm this information, as the government

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is naturally reticent in giving out any information regarding prices. With the enormous shortage in the present supply, it would appear that an advance of say 10 shillings per picul could easily be maintained, and the only reason why such an advance might not be made is that the government does not wish to encourage too deep a research into chemistry for an artificial substitute. Without being able to secure direct information, I am inclined to credit the information at hand that the price will not be materially advanced during the next year. The present price of the "B" grade, cost, insurance, and freight, New York, is 175 shillings per hundredweight of 112 pounds, or 100 yen per picul. The direct cost (not including maintenance of the camphor bureau) to the government of this grade, delivered to the selling agent, is about 35 yen per picul.

CHEMICALS IN AMERICA.

OUTLOOK FOR THE INDUSTRY IN THE UNITED STATES.

Consul Ledoux, of Prague, says that a Dr. Paul Cohn, an Austrian expert, a professor of the technical museum of Vienna, discusses the possibilities of the small chemical industries of Europe being crowded out by American competition. He writes:

After giving interesting statistics showing that the mineral wealth of America, both as to the variety of the product and the yield of the mines, exceeds that of any other country, Doctor Cohn says that, though we have an abundant quantity of raw material to promote our chemical industries, we have not sufficient skilled labor, which may explain the incontestable inferiority of the American chemical industries compared with those of England or Germany.

This, the writer says, is being remedied by the adoption of the German method of instruction, by the erection of schools on the German model, and by the encouragement of technical education by every possible means, helped with lavish expenditures of money such as is not to be met in European countries. Doctor Cohn concludes by saying that in ten years—possibly sooner—these shortcomings will have been remedied, and then, to the disadvantage of the European chemical industries, the American chemical industries will be fully equal to those of any country of Europe. Doctor Cohn adds the statement that we have already reached complete independence as regards two chemical products, soda and sulphuric acid.

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LABOR.

SYSTEM OF COLONIES.

RESULTS OBTAINED IN VARIOUS COUNTRIES.

EFFORTS TO SOLVE THE PROBLEM OF DEALING WITH UNEMPLOYED WORKMEN.

The problem of what to do with and for the unemployed has led to the establishment of labor colonies in several European countries. While these colonies by no means give employment to all of the out-of-work population, or even to a large part thereof, they certainly point a way toward a solution of the problem.

DUTCH COLONIES.

The largest experiments in this line were made in the Netherlands, northeast of the Zuyder Zee, where three colonies have been established. They were first suggested just after the battle of Waterloo, thousands of families having been reduced to poverty by war. Philanthropic persons secured tracts of land on which such families were domiciled and encouraged to work the soil. This experiment proved so successful that the State urged the society operating it to take charge of beggars, foundlings, and orphans. Separate colonies were founded for them; but this experiment did not succeed, and these colonies were taken over by the State.

The governing principle of the Dutch labor colonies is to assist the unemployed by giving them work on the land. After experience has been gained and a reputation for industry and efficiency has been established, they settle the colonists on free farms. Generally, the laborer does not remain in the colony more than two years. If then not found worthy he is expected to leave. If worthy, he is provided with a farm of 7½ acres, for which he pays an annual rent. Besides this, he gets a cow and some other conveniences, for which he is expected to pay in annual installments.

The population of these Dutch labor colonies is now reported to be about 5,000. The colonists are taught all the common branches of agriculture, besides horticulture and dairying. The Government renders some financial assistance. The sale of products and private contributions supply the remainder of the necessary funds.

GERMAN COLONIES.

Germany has several labor colonies. Lühlerheim, not far from the Dutch frontier, is considered the best. It was founded about twenty years ago, on poor land costing $10 an acre. The colonists are

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employed during the farming season in cultivating the land; in the winter, many are hired by neighboring landowners for various purposes. Stock is also raised in this colony, the sale of which makes a considerable revenue. Descriptions of the German labor colonies lead to the discovery that they differ from the Dutch colonies in the class of people whom they help. The Dutch colonists are primarily poor families; the German colonists, it is said, are mostly men who have been in prison, and are of an inferior class—inferior in physique, in general efficiency, in moral balance, or in all of these together. Few, however, have been guilty of serious offenses, and generally their conduct in the colonies is exemplary. In short, they seem to be men who need removal from temptation rather than punishment. Outside they would drift to the bad from sheer inability to sustain themselves respectably, unaided. Here they are industrious and useful. There is apparently no time limit to their stay in these colonies.

BELGIAN COLONIES.

Belgium has three labor colonies, situated on a sandy plain about 30 miles from Antwerp. They have converted a wilderness into farms, woodlands, and gardens. One of the colonies is for the aged, imbecile, and infirm; another for persons whose poverty has come from circumstances beyond their control; the other for able-bodied beggars, vagrants, and criminals. The population of the three colonies is over 6,000. The colonists work not only at agriculture, but in flour, brick, soap, pearl button, beer, leather, and other factories. These colonies are said to be nearly self-supporting; but, even if they are not, it is claimed that they are well worth all that they cost in having practically cleared Belgium of tramps and beggars. Unlike the German colonies, where, as a rule, entrance is purely voluntary, the Belgian colonies are inhabited chiefly by persons who have been sent thither, and are, therefore, in the nature of penal colonies. Formerly measures were taken to prevent escape, but these are now discontinued, experience showing that there was less dissatisfaction if it was easy to get away.

ENGLISH COLONIES.

Progress is being made in England along similar lines. The movement was begun ten years ago by the Christian Union for Social Service, the leading spirit of which society was a Congregational minister of Nottingham, though clergymen and bishops of the Established Church are among its officers. Two colonies were established—one at Crook, in Westmoreland, the other at Lingfield, in Surrey. Lingfield, the larger colony, has a farm of 250 acres and accommodations at present for about 60 men. In addition, this colony extends its beneficent work to epileptic children, for 100 of whom it has accommodations, including a school. The reports rendered show that all the epileptic children are either improved or their condition ameliorated, while some are entirely cured, though true epilepsy is generally supposed to be incurable. The men at Lingfield work at various trades, at market gardening, and at farming. Fifty or sixty are received and leave each year. The latest published report shows that, in the preceding year, of 54 men who left Lingfield, 2 were dismissed, 2 were sent to lunatic asylums, 8 were returned to those who sent them to the

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colony, 12 absconded, 6 went in search of work, 6 went to situations in Canada, and 18 went to situations in this country. This indicates the general yearly average. Of about 500 men passing through the colony since its foundation, about 33 per cent have been rehabilitated and put into the direct way of earning their living. These men come, in some cases, voluntarily to the colony, others are sent by charitable and religious societies, others by municipal guardians of the poor, and some are professional tramps. The latter are not encouraged, but in a few cases they have apparently been redeemed. Some of these men were drunkards, some despondent bankrupts, others physical wrecks—in all instances broken and destitute, with no outlook in life and a burden to others. Not one among the hundreds sent to Lingfield was at the same time sober, healthy, skillful, young, and industrious. Guardians of the poor, in particular, make it a rule to send only their apparently hopeless cases. To give health, hope, and employment to one-third of such wrecks of humanity is certainly a gratifying record. Relapses are to be expected, but so far none are publicly reported.

"HOUSE BROTHERS."

At Lingfield the colonists are in charge of so-called "House Brothers." These are men who give themselves to the work of training and guiding the colonists, from a desire to help their fellow beings. They must be single men, Christians, and total abstainers. The cost of maintaining each colonist is about $2 a week, excluding clothing, which is provided by the guardians of the poor. Superintendence and medical care cost unavoidably about a quarter of the total. Neither of the English colonies is self-supporting. Land and buildings were secured through voluntary subscriptions, and the cost of maintenance, beyond what is paid from the colonies' products, is borne by the relatives or friends and the poor guardians who send the men and children there.

It is obvious that these English labor colonies are not specially noteworthy on account of the present extent of their work. Their nature and significance, their methods and results, and the fact that they point the way to a possible solution of one of the most serious of all social problems, invest the colonies with an interest and importance far beyond their mere superficial consequence.

ENGLAND.

THE UNEMPLOYED ACT.

POWERS AND DUTIES OF THE DISTRESS COMMITTEE.

Consul Mahin, of Nottingham, reports that the authorities of that city have appointed a distress committee, under the act of Parliament regarding measures for the relief of unemployed workmen. Mr. Mahin writes:

The Nottingham city council has appointed the local committee prescribed by the unemployed workmen act of the recent session of Parliament, and has taken other measures to effectuate its provisions.

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The act does not contemplate any interference with or enlargement of the powers and duties of the existing guardians of the poor nor relief by gifts of money or goods. It is designed merely to assist people out of work to make their own living. Pursuant to the provisions of the act, the Nottingham council appointed 16 of its own members, 12 from the local board of guardians, and 7 from persons experienced in the relief of distress—35 in all—as a distress committee.

POWERS AND DUTIES.

The powers and duties of this body, as prescribed by the law, amplified and clarified by rules and regulations of the local government board, are substantially as follows:

(1) Obtaining information with reference to the unemployed. This information is to extend to a large number of particulars to be entered in a record paper. The distress committee are also to keep a register for recording the names, addresses, and particulars of each person who makes application. They are also to keep at all times ready for use an alphabetical index. The committee are required by their officer or by one of themselves personally to investigate every application, and when necessary to communicate with the board of guardians thereon.

(2) Under certain conditions the distress committee may aid emigration of an unemployed person and his dependents. The committee, however, can only aid emigration when it is ascertained that the unemployed person will be forthwith put into a position to obtain regular work or means of supporting himself and any of his dependents.

REMOVAL OF UNEMPLOYED.

(3) The distress committee can aid the removal of the unemployed to another area within the limits of England and Wales. This power, however, is limited to those cases in which the unemployed will be put at once in a position to obtain regular work, or other means of supporting himself and any of his dependents, and in which suitable dwelling accommodation for the person or persons to be removed can be provided at the place of destination. Further, that such regular work will be of such duration or that the facilities for other employment will be such as to afford reasonable expectation that the persons removed will not become chargeable to the poor rate at any time during the period of twelve months after such removal.

(4) The distress committee may provide or contribute toward the provision of work. This power, however, is limited by stringent conditions. The work must be of actual and substantial utility. Each person employed must be subject to effectual supervision. Each such person must perform every task allotted to him with diligence, and must attain a certain standard of efficiency. Each person shall be employed as far as possible continuously, with such absence only as may be necessary to search for work elsewhere. Under certain conditions the distress committee must satisfy themselves that the cost for lodgings and maintenance of the wife, children, and dependents will be defrayed by deductions from the remuneration of the person employed. There are other conditions also as to the total remuneration which may be earned by unskilled laborers. In no case may the

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provision of temporary work continue for longer than sixteen weeks in any period of twelve months, except with the consent of the local government board. The distress committee can contribute toward the provision of temporary work in those cases only in which the work is provided by a local authority or public body.

FARMS AND COLONIES.

(5) The distress committee may establish a farm colony. This can only be done with the consent of the local government board, and such information must be supplied to that board as will enable the members of that board to satisfy themselves as to the propriety of such a step, and that all expenses incurred in connection with the establishment, maintenance, and working of the farm colony may be reasonably expected to be defrayed out of voluntary contributions or otherwise than out of contributions by any council. If a farm colony is established powers are conferred upon the distress committee, with the consent of the local goverment board, to provide accommodation for persons working upon the land. The local government board are to be satisfied that the cost of such temporary accommodation will be supplied by voluntary contributions.

(6) The distress committee is authorized to accept donations. The accounts of the distress committee are to be audited by an auditor appointed by the local government board with powers of surcharge.

There are provisions enabling the distress committee to borrow money for the purchase of land.

The powers of the distress committee are confined to applicants who are of good character who have not sufficient means of maintaining themselves and their dependents, and who have not during the period of twelve months immediately preceding the date of their application been in receipt of relief, other than medical relief, at the cost of the poor rate.

It is expected that the operation of the law will add a penny in the pound (equivalent to about 4 mills on the dollar of assessed value) to local taxation. It is hoped, however, that the brightening trade prospects will tend to ease the committee's work.

General public opinion as heard in current talk is hardly commendatory of the law, passed, it is declared, merely to satisfy a hard-times clamor for relief. In any case, the situation bristles with all sorts of difficulties, and the various distress committees have a perplexing task on their hands.

WALES.

NO LOCKOUT IN THE COAL FIELDS.

Consul Daniel W. Williams, of Cardiff, reports that there will be no general lockout or strike in the Welsh coal fields in January, the conciliation board, which represents masters and miners, having formulated a new agreement, to continue until December 31, 1909. The terms of the agreement are practically the same as those which have been in operation for the past three years. Mr. Williams writes:

It was realized by all parties that any further reduction of wages would have precipitated a strike involving about 163,000 miners. Any stoppage of the mines at the present time would have resulted in serious losses to the masters as well as to the miners, for the very

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obvious reason that much of the present depression is caused by the competition of cheaper German and Belgian coals in the European markets, and any shortage of Welsh coal would give foreign coals further opportunities to gain new markets. On the other hand, certain contingencies may restore a measure of prosperity. In the first place, a strong effort will be made the coming year to remove the Government tax of 1 shilling a ton, which the masters regard as a handicap. Possible strikes in other countries will also benefit Welsh coal. Much interest is taken in the mining situation in the United States, and the course of events there is eagerly watched. This is only natural, for the Welsh masters will not forget very soon the boom in Welsh coal during the last miners' strike in the United States. Should a stoppage of the mines in that country occur on April 1, 1906, the low price of Welsh coal will enable it to enter American markets on better terms than it did four or five years ago, when its price ranged from $4.40 to $5.97 a ton. Another fact to be borne in mind in connection with the long term of the new agreement is that all the mines supplying the superior coal for the British royal navy are in South Wales.

AUSTRIA.

HOUSING WORKINGMEN.

A LIBERAL SYSTEM TO PROVIDE HOMES.

Consul Harris, of Chemnitz, reports the efforts in Austria to secure comfortable and sanitary homes for workingmen. The results may be regarded as fairly successful. He writes:

So much is being done in housing working people in Austria that the system in vogue and the extent of the work being done form a subject which is worthy of attention. In a great many respects the practice of caring for working people is more widespread than in Germany or England, although in no single instance has such a state of perfection been reached as in the case of Krupp and others which I have described in former reports on this subject. In Austria the aim seems to be to attain the greatest good for the greatest number of people, and a study of different phases of the question as it exists in that country brings to light many interesting and instructive features.

The Wienerberger brick-making establishment in Vienna has built homes for about 2,500 families. The houses are placed at the disposal of the workingmen free of rent. The company not only lets the homes free of rent, but also delivers gratis the necessary fuel for heating and cooking purposes. The workingmen must pay for their own furniture and light. This very liberal system is applied only to the workman and his immediate family, which is understood to consist of only the wife and all children under 14 years of age. In case there are many children in the family, the parents of the workman or those of his wife may wait upon and look after such children as far as the local laws governing overcrowded tenements or flats will permit.

TITLE HELD BY EMPLOYERS.

This system of housing workingmen, however, forms a part of their wages, and the moment a workman leaves the employ of the com-

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pany he must vacate, together with every member of his family, the dwelling which he has occupied during the period of his employment. The children of workingmen holding independent positions outside of the company's works are not permitted to live with their parents in any part of the dwellings without paying a weekly rent of 20 cents per capita. This sum is regularly deducted from the father's wages. The rules in this respect are very strict. It is sufficient cause for dismissal if the head of a family attempts to dodge these provisions by even inviting some of his next of kin or some visitor to remain overnight. Each and every workingman living in such a dwelling belonging to the company is compelled to keep the living rooms, kitchen, cellar, and outhouses in a state of absolute cleanliness, and to have them aired daily. Goats, poultry, and rabbits may not be kept in the vicinity of the dwellings, and whoever in any way mars the houses or rooms renders himself liable for damages. Only a sufficient amount of fuel is allowed to be kept on hand for one day's use. The hallways and stairs are lighted at night at the expense of the company.

THE PRACTICE IS GENERAL.

This example is a fair criterion of what every manufacturing establishment in Austria is striving to do. Nor is the practice of furnishing free dwellings to workmen confined to any particular branch of industry. Naturally the rate of wages is somewhat lower than that paid in some other countries of Europe, but it is claimed that a well-organized and intensive system of housing, based upon business principles, furnishes to the workingmen in the long run, taking everything into consideration, a higher rate of wages than if he were compelled to shift for himself and family in this respect. Aside from the fact that the dwellings are much better, it has also been found that the rules enforcing cleanliness have proved very salutary.

In 1904 the imperial statistical office in the ministry of commerce at Vienna sent a circular letter to all the factories and mills throughout Austria-Hungary asking for specific information in regard to the extent the workingmen were being housed by their employers. Nearly 1,100 answers were received from as many separate and independent enterprises which employed labor on a large and small scale. It was clearly shown that the tendency in Austria is to place dwellings free of rent at the disposal of their workingmen. It was also clearly shown that this practice tends to reduce the number of strikes in practically every branch of industry.

GERMANY.

IMPROVED CONDITIONS.

ACTIVITY IN IRON AND STEEL INDUSTRIES.

Consul-General Guenther, of Frankfort, furnishes the following interesting report on the condition of the labor market in Germany compared with the preceding year:

The condition of the German labor market during October, 1905, shows a strong improvement over October, 1904, and also over September of the present year. In October, 1904, the unfavorable situation in the coal-mining districts and in the iron industry depressed

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the labor market. Business in many textile districts was also unsatisfactory and traffic at the seaports was dull. These unfavorable conditions do not exist now. While last year there were 130.9 applicants for each 100 vacancies, the number in October, 1905, was only 112.2. The favorable condition of the labor market in the great industrial centers is mainly due to the marked improvement in the iron and steel and in the metal and machinery branches. The number of employees during the year has increased in these from month to month and the fall business has received orders which guarantee a continuation of these conditions for a longer time.

In all the establishments which manufacture material for the army and navy work is plentiful. The Krupp works at Essen has received orders which require many of the workingmen to work overtime, although the force has been greatly increased. The shipbuilding yards are also very busy and the number of workmen had to be increased, especially at the Imperial shipyards at Kiel. In the centers of the machinery factories in Rhenish Westphalia, as well as in Saxony, business is satisfactory.

The small ironware industry has seldom seen such good times as last October. The building trade continues to be well employed, which was not the case last year at this time. In many places there was even a lack of workmen in the building branch. A strong demand for unskilled labor was especially noticeable at Hamburg, Berlin, Charlottenburg, Leipzig, Ludwigshafen, etc., and although the wages ruled high many foreigners had to be employed. The conditions in the textile branches at Bielefeld, Barmen, München-Gladbach, and Aix-la-Chapelle were much improved over last year. In the great seaports the demand for labor has been large, and at Hamburg the supply was frequently inadequate to the demand. Complaints as to the lack of domestic servants are heard everywhere, even in the small cities.

SAXONY.

BUSINESS DEPRESSION DISAPPEARING.

Consul Harris, of Chemnitz, reports that the Dresden Chamber of Commerce recently issued a small pamphlet in which the present condition of certain industries in Saxony was treated. The statistical information is based upon the results of direct inquiry as to the general state of business in 172 joint-stock companies engaged in commercial and industrial enterprises throughout the country. The consul writes:

Taken on the whole, the impartial observer, after studying this report, can not fail to be impressed with the fact that the upward movement of business conditions at large in Saxony has practically come to a standstill. It would seem that the great period of enterprise and universal prosperity had come to an end. This is amply shown by the fact that the number of stock companies being formed from year to year has gradually decreased since 1899, while, on the other hand, the number of companies formed with limited capital has noticeably increased. The most important commercial institutions in Saxony are unquestionably the banks. They control fully 50 per cent

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of the capital invested in money-making enterprises. Yet the average earnings of these banks are from 3 to 4 per cent less than in 1899.

On the other hand, however, there are signs that the period of commercial and industrial depression which began in 1901 is being slowly but gradually overcome. The dividends declared in the electrical works, machine and glass factories, etc., would indicate this, as they are from 2 to 3 per cent higher than in 1901, although not as high as in 1899. The general tendency in times of great prosperity is to speculate to such an extent that hard times and financial depression soon set in, and a reaction detrimental to every branch of industry is the result. The general business outlook, however, in Saxony, although not bright, owing to the feverish tendency of the workmen to strike in many industries, is such that better times may be expected. The present condition of the hosiery industry of Chemnitz may be cited as a good example of where prosperity has again set in after several years of depression.

FRANCE.

LIFE OF A LABORER.

INTERESTING AND NOVEL EXPOSITION.

Consul Atwell, of Roubaix, France, reports a resolution passed by the French Chamber of Deputies requesting the Government to appoint a commission to look into the question of finding ways and means to organize an international exposition to be held at Paris in 1909 in which there will be as full and perfect a display as possible of a laborer's life. The consul says:

At the first meeting of this commission, held recently in Paris at the department of commerce, Mr. Dubief, minister of commerce, who presided, set forth the advantages to be derived from a universal exposition, also the difficulties to be encountered in attaining the end desired.

Mr. Leon Bourgeois, president of the French Chamber, followed with remarks concerning the object lesson of such an exposition as the one contemplated. It would serve, he thought, as a comparison between the conditions of the life of the laborer of to-day in all countries of the world and conditions existing in past centuries. It would serve also as a striking illustration to the laboring classes of the steps by which they have gradually freed themselves from the state of servitude existing in feudal times until they have arrived at the independence enjoyed to-day. It would enlighten them as to legislation enacted for their relief and protection through successive centuries, also concerning the work of social organizations occupied with their advancement. The idea is a novel one, and this exposition can not fail to appeal to all who strive to elevate the condition of the laborer.

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FISHING INDUSTRY.

COMBINE TO CONTROL PRICES.

ORGANIZATION BY THE DEEP-SEA FISHERMEN.

SUPPLY AND PRICES TO BE REGULATED—LAW FAVORS THE SCHEME.

Commercial Agent Freeman, of St. Pierre, furnishes the following report, describing a combination of parties in Paris and Newfoundland interested in the cod and other deep-sea fisheries, with the object of regulating prices. He writes:

The society La Morue Française, with headquarters at Paris, France, and a paid-up capital of 3,000,000 francs ($579,000), has been organized by the fish-dealing firms of S. A. Legasse neveu et cie., A. Cabissol et cie., Sècheries de Morues de Port de Bouc, and Emile Hoduce, of St. Pierre and France. This society is organized much on the lines of corporations of the United States, and has in view the object of cheaper production by combination and to regulate the supply of fish for France. The prohibitive duty on codfish and the bounty paid by the Government closes the market from foreign competition, and the society La Morue Française, with its capital and resources, can regulate not only the supply but also the price.

The society owns and employs in the bank fisheries over 50 vessels; owns and employs about 20 engaged in freighting; has the mail contract between this place, Sydney, Cape Breton, and Halifax, Nova Scotia, for which it receives $19,300 per year, and has now building in France a new steamer for this service, which gives them control of the freight and passenger business from the United States, Canada, and St. Pierre. The society also owns a tugboat, employed at St. Pierre and vicinity. The estimated tonnage owned is 7,000; as much more is controlled, employing probably 1,500 men. With headquarters in Paris, the society has five places of business at St. Pierre, and agencies at Marseille, Bordeaux, Bayonne, St. Malo, and Fecamp.

It is the intention of the society to build the coming season a bait refrigerator, and the manager, M. Louis Legasse, would like to hear from American manufacturers of refrigerator plants, with a view of placing an order. He would also like to hear from American bank fishermen in regard to making St. Pierre the baiting headquarters of the American fleet.

OTHER PROTECTIVE SOCIETIES.

Since the formation of the Morue Française there have been organized, with the approval of the Government, two societies, which include St. Pierre fishing interests not controlled by the Morue Française, each having the same objects, which are to settle disputes arising among the members, to push claims for bounty against the Govern-

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ment, and to see that the members get their just dues in a business way. Each member subscribing binds himself to refer all matters to the executive committee to settle, and to abide by the decision. The executive committee on their part are bound to push the smallest claims equally with the large. These societies are mutually protective, but are not engaged in mercantile affairs further than to see that members get their just dues and avoid as much as possible litigation. These organizations, so soon after the formation of the Morue Française, are suggestive.

EMIGRATION.

Three years of poor fisheries at St. Pierre have not only interfered with business, but is believed to be responsible for loss of population. The last census showed a permanent population of about 7,000 for these islands. The poor fisheries have driven many small owners out of business, the number of vessels engaged in the bank fisheries having decreased, as also the people employed. This lack of employment has started many to seek for a livelihood elsewhere. M. Menier, owner of the island of Anticosti in the mouth of the St. Lawrence River, has taken advantage of the lack of employment at St. Pierre, introduced agents and secured about 500 emigrants to settle at Anticosti. It is estimated that 50 fishermen, with their families, have gone to Gloucester and other fishing ports in the United States, 25 to other parts of the United States, and 300 to Canada, principally Cape Breton. The decrease in population for the last three years must be nearly 1,000, or one-seventh of the entire population of the colony. Owners of vessels are complaining of their inability to secure the necessary crews, and the men to be employed are looking for higher wages. At least one-half of St. Pierre vessels are manned by men engaged in France. The migration will force owners to look to that country for the necessary fishermen to man their vessels. This movement of the population will be a loss, as the resident fishermen are considered more capable than those of France. Nothing is being done to induce the people to remain, and unless some movement is made St. Pierre will seriously suffer.

LAKE ERIE.

GOVERNMENT REGULATIONS.

Consul Harvey, of Fort Erie, Ontario, furnishes the following on fishing in Lake Erie:

The Canadian government issues fish licenses to parties all along the north shore of Lake Erie. I recently visited a Fort Erie man who has a lease of 6 miles of the shore between Port Colborne and Dunnville, for which he pays $600. He has six nets extending from the shore 1½ miles out into the lake. The nets are deep enough to allow the lead line to rest on the bottom and the cork line on the surface of the water, the outer end being 45 feet in depth. Each net has two or more cribs. The fish follow along the net until they come to the crib, which is about 30 feet square, the bottom and sides composed of small meshed netting that holds a fish of one-fourth pound weight.

When the nets are lifted they contain from 500 to 2,000 pounds of fish which are dipped out with a scoop net, except the sturgeon, which

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are lifted with a gaff hook. The law requires the black bass to be returned to the water, but as there is seldon any inspector present the law is not enforced. The 100 or more black bass I saw taken would not average more than a pound in weight, while a few years ago the average run was 3 pounds.

If the two governments would join and prohibit net fishing in Lake Erie for four years fish would become plentiful and of good size. Net fishing is not allowed in Niagara River, but the net fishing on both sides of the lake prevents fish from getting down the river, and Buffalo anglers have to go to Canadian lakes for their sport. The fish caught in the lake are sorted, packed in 100-pound boxes, and expressed to Buffalo or New York, where they are sold to the consumer for 10 cents per pound.

LOBSTERS IN ENGLAND.

Consul Griffith, of Liverpool, responding to inquiries from the United States regarding the advisability of making consignments of lobsters to England, writes:

The market prices of English lobsters fluctuate very much, according to the supply and demand. On October 23 lobsters brought 16 cents per pound and on the following day 26 cents. With regard to size the law requires that all lobsters offered for sale must measure at least 8 inches from nose to tail. The most salable size, however, are those weighing from 1 to 2 pounds. Lobsters are in season all the year round in Liverpool. There is practically no difference in the form, color, or flavor of the American compared with the English lobster. Excepting the law relating to the size of lobsters that may be offered for sale, there are no legal restrictions against the importation of American lobsters in this country. There are two or three commission houses in this city who doubtless would be willing to receive a consignment from the United States and dispose of them to the best advantage. One of the largest dealers here, C. Petrie, 15–21 Rose street, has expressed willingness to receive such consignments. This firm is considered to be of high commercial standing.

TRANSPORTING LONG DISTANCES.

Consul-General Guenther, of Frankfort, writes that it is reported from Paris that the experiments made by Professor Gruvel, of the University of Bordeaux, who is also chief of the fishery commission for the western coast of Africa, with reference to keeping fish in refrigerators or upon snow, have been closed after twenty-three days.

They have proven that it is possible to ship fresh fish, as sole, etc., in perfect condition from the African coast to France. Lobsters which had been boiled at once and kept in refrigerator chambers arrived in Paris from West Africa perfect in freshness and flavor. The sampling occurred at a Paris restaurant under the chairmanship of Mr. Dybowski, inspector-general of colonial agriculture, in presence of numerous merchants and manufacturers. It has already been agreed upon to inaugurate a regular steamship service for the purpose of supplying fresh salt-water fish from the western coast of Africa.

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SCIENTIFIC.

USEFUL INVENTIONS.

PROCESS FOR DESTROYING ANTS.

SIMPLE METHOD FOR THE PRESERVATION OF TIMBER.

Consul Liefeld, of Freiburg, Germany, writes concerning a remarkable method for preserving soft woods from the ravages of white ants:

A new process has been discovered for warring against white ants, the pests of the Tropics. These termites, as they are called, destroy the woodwork of the finest buildings within six months. Their action is insidious, inasmuch as the outward appearance of the wood does not betray the rottenness within, and their ravages, if not discovered in time, lead to the total collapse of buildings.

No woods resist the termites except eucalypti and teak. If soft wood is used in tropical countries it must be saturated with kerosene.

Some time ago it was suggested that experiments should be carried out by the Powell Wood Process Syndicate, of London, England. Specimens were prepared and sent out to a number of tropical countries.

After a somewhat protracted trial, news has been received from the Madras Presidency that the specimens sent there have successfully resisted the attacks of the white ants. The great importance of this new process to India, Australia, South Africa, and other tropical regions can scarcely be overestimated. The enormous loss entailed each year by these destructive grubs to furniture, railway sleepers, and houses will measure the value of the new discovery.

PROCESS SIMPLE.

The process is very simple, and adds little to the cost of the timber. To those who are technically interested in the new process it may be explained that it is one which rapidly seasons newly cut timber, and, unlike other systems, improves, toughens, and strengthens the wood, enhancing the appearance, and resisting the attacks of dry rot, which in temperate countries is the equivalent of termites. This is accomplished by boiling the timber in a saccharine solution, which extracts the air and coagulates the albumen in the sap. In cooling, the air spaces are filled with saccharine matter, which in large measure is analogous to the fiber of timber. The timber is then rapidly dried in fairly high temperatures, and becomes a homogeneous, vegetable substance, which does not expand, warp, contract, or split like ordinary timber.

A revolution in the export timber trade to tropical countries is likely to ensue. In tropical regions where termites abound, soft woods will now replace the more expensive hard woods. The cost of building permanent railways, bridges, piers, etc., will be greatly reduced, and the anxieties attending the inroads of the white ant will be eliminated.

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DEAD LEAVES.

GREATER IN VALUE THAN STABLE MANURE.

Consul Goldschmidt, of Nantes, furnishes a report containing facts that will be interesting to our agricultural interests. The value of dead leaves, compared with ordinary manure, has been the subject of scientific test, and the results are given by the consul. He writes:

A great part of the suburban population of this city is engaged in gardening, and especially in the cultivation of early vegetables. For many years use has been made of the dead leaves which fall from the trees in the autumn, and when such can be obtained by the small farmers, they are eagerly gathered and employed as fertilizers or to cover certain plants during the coldest winter months. Frequently these leaves are first used as bedding for cattle and horses, and the manure thus obtained is considered much richer than that of ordinary straw.

A writer in the Phare de la Loire shows, in a table just published, the relative fertilizing value of certain kinds of leaves, most of which are rich in nitrogenous contents and consequently good as fertilizers. According to this writer the following are the contents of nitrogen of some of the leaves after their fall in autum:

	Per cent.
Pear	1.86
Oak	1.18
Poplar	.75
Beech	.78
Locust	.72
Elm	.73
Vine	.35

An examination of the fertilizing value of the dead leaves compared with that of ordinary manure shows the following results: 44 pounds of pear leaves, 80 pounds of poplar, 51 pounds of peach, 83 pounds of locust, 82 pounds of elm, and 174 pounds of vine, respectively, are equal in nitrogen to 100 pounds of manure.

An interesting and valuable table might be established showing the fertilizing value of the various leaves from American trees, particularly when it is considered that in the United States such leaves are easily obtainable by the farmers, who are generally owners of some woodland where the leaves might be gathered at will, which is not the case in Europe, where forests are generally either the property of the State or of some individual park preserves.

VIGORIT.

INVENTION OF A NEW EXPLOSIVE.

Consul Bardel, of Bamberg, reports that a new explosive has been invented by Dr. G. Schultz, of Munich, and Mr. Fritz Gehre, an engineer, of Pullach, Bavaria, which has been given the name "Vigorit." The consul says:

The inventors claim that the new explosive is absolutely safe against friction or concussion; that it can only be fired by an electric current; it can not be affected by water, and is therefore safe for transportation

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on land as well as by water. Fire does not explode vigorit; it simply burns it up. Vigorit is free of poisonous gases after the discharge, and therefore well adapted for mining purposes. The new explosive can be made in different grades, and it is further claimed to be particularly well adapted for the filling of charges for heavy guns. For this latter purpose the inventors claim the cost of production will be 110 marks ($26.18) for 100 kilograms (220.46 pounds) while picric acid, which up to now has almost exclusively been used for this purpose, costs 300 marks ($71.40) for 100 kilograms. For other purposes vigorit can be produced at 70 marks ($16.66) for 100 kilograms, including all expenses, at the same time offering the advantage of being lighter than all other similar explosives. To demonstrate the merits of the new explosive different experiments have been made under the supervision of men of experience, such as mining engineers, officers of the army, and other experts, and the result was pronounced to be highly successful.

Arrangements are now under way for permits to transport vigorit on the railroads. Until these are completed the component parts of the explosive have to be shipped separately. Pending the adjustment of all similar obstacles the manufacture of vigorit is being conducted in a small way at Pullach. It is proposed, however, later to erect large plants for the manufacture of the new explosive in the northern part of Bavaria, where better waterways for the transportation of raw material and coal will cheapen the cost of production. The inventors expect to be able to do heavy business with the United States or else to dispose to some American enterprising company their patent rights at a satisfactory figure.

PHOTOGRAPHS BY WIRE.

SUCCESSFUL EXPERIMENTS WITH SELENIUM AS THE AGENT.

Consul Liefeld, of Frieburg, furnishes a clipping from the London Standard, whose Berlin correspondent reports a lecture at Munich, delivered before the Electro-Technical Association by Professor Korn, in which the progress made to perfect his apparatus for transmitting photographs over telegraph wires is given:

Professor Korn stated that the problem of telegraphing photographs had been solved in principle. The apparatus will be ready for general use when a few technical improvements have been introduced. The experiments which the professor has already carried out prove that it is possible to transmit a photograph or sketch, 6 or 7 inches square, in a period varying from ten to twenty minutes. These experiments were carried out on the telegraph line from Munich to Nuremberg, a distance of about 100 miles, but Professor Korn declares that precisely the same results would be obtained if the photographs were transmitted by a telegraph line or submarine cable 5,000 miles in length.

METHOD OF TRANSMISSION.

The photograph which has to be transmitted is placed on a transparent glass cylinder, which revolves slowly, and at the same time

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moves from right to left. A ray of light is thrown on this cylinder by means of an electric lamp and lens, and when the ray of light reaches the interior of the cylinder it is brighter or darker, according to the coloring of that particular part of the photograph through which it passes. Inside the cylinder is some selenium, which transmits the electrical current in proportion to the intensity of the light brought to bear on it. The selenium transmits the current more rapidly in a bright light and less rapidly as the light decreases. The selenium within the cylinder is connected with the wire over which the photograph is to be transmitted.

HOW RECEIVED.

The receiving station consists of an electrical Nernst lamp placed inside a glass cylinder covered with sensitized paper. The Nernst lamp burns more or less brightly according to the varying current transmitted by the selenium at the other end. It thus reproduces the exact shade of the original photograph, provided that the cylinders at each end of the wire revolve at exactly the same speed. The professor has ascertained a simple means of regulating the revolution of the cylinders so that the speed is identical at both ends. Professor Korn stated that when the improvements on which he is now working are introduced it will be possible to transmit a photograph or sketch, of half a dozen inches square, within five seconds instead of ten or fifteen minutes.

PUMICE STONE.

FIVE ARTIFICIAL VARIETIES PRODUCED.

Consul-General Guenther, of Frankfort, reports a German invention by which artificial pumice stone is produced by a mixture of sand and clay. He writes:

Pumice stone, aside from its use as a cleaning agent, belongs to the most important polishing substances. While emery is used for polishing tools, polishing paper for stone and glass, oxide of iron for fine glassware, and lime for metals, pumice stone is employed for polishing softer articles. Pumice stone as found in nature is, according to its composition, nothing but lava which has received its foam-like porosity through the fact that the volcanic stone substance was cooled very rapidly under strong development of gases. Natural pumice stone, which, for industrial purposes, comes almost exclusively from the island of Lipari, is of little firmness, and for that reason experiments have been made for some time to find an artificial substitute of greater durability. This seems now to have been accomplished through a German invention under which artificial pumice stone is made by mixing sand and clay.

This artificial pumice stone is made in five different kinds. The first is either hard or soft with a coarse grain and used for leather, waterproof garments, and for the felt and woolen industry. The second can also be supplied hard or soft. It has a medium grain and is mainly used for stucco and sculptural work, as also for rubbing wood before painting. The third is soft, of fine grain, and is recommended for polishing wood and tin. The fourth is of medium hard-

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ness and fine grain and gives to wood the right polish before being finished with oil. The fifth is hard and of fine grain and used for polishing stone, especially lithographic stone. The manner of using is the same as for natural pumice stone. For wood it is first used dry, afterwards mixed with oil.

CONVERSION OF GARBAGE.

ELECTRICITY PRODUCED FROM THE HEAT ENGENDERED.

Consul-General Guenther, of Frankfort, furnishes the following description of a plant recently erected at Zurich, Switzerland, for disposing of the city's garbage by burning, the heat engendered being utilized to manufacture electricity. The consul-general writes:

The plant is located in the outskirts and contains twelve furnaces, which are capable of burning 120 metric tons of garbage in twenty-four hours. The wagons loaded with garbage are lifted by means of an electric derrick upon a platform above the furnace into which the garbage is dumped. As garbage, however, does not burn easily, an electric blower injects a strong current of air which has been heated by passing through flues in the furnace walls. The heat engendered by the burning of the garbage is sufficient to make steam in two large boilers of 8 atmospheres superpressure. The steam is used in the usual way to operate the dynamo. The electric power produced is used first for the purpose of the plant and to supply part of the power for the electric railroads of the city. Complete combustion of the garbage does not take place. From 30 to 40 per cent of its original weight remains in the form of slag. This slag, by mixing with lime, is used for making bricks and paving blocks. The plant is said to be paying well.

SCHIFFSKREISEL.

APPLIANCE TO PREVENT SEASICKNESS.

According to German papers forwarded by Consul-General Guenther, of Frankfort, Mr. Otto Schlick, of Hamburg, has invented an appliance which reduces the rolling of ships to a minimum. He calls it "Schiffskreisel" (ship top). It is stated that if it fills expectations it will prove of great importance, not only that seasickness would be done away with, but the efficiency of war ships would be greatly enhanced, as the hitting ability would be vastly increased. Much interest appears to be manifested in this invention in shipbuilding circles. Recently larger experiments with this "top" took place at the works of the Hamburg-America Line, in the harbor of Hamburg, before a company of interested parties. Into the old torpedo boat *Seebaer* a ship top had been built into the boat amidships. This top has turbine paddles and is so constructed that it can make simultaneously rotating and pendulous motions. By the combined motion the rolling of the ship is to be averted. The apparatus was set in motion by steam power, making 2,300 revolutions per minute, and the result is said to have been such as to justify the belief that it would accomplish what is claimed for it.

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MEDICAL.

BUBONIC PLAGUE.

SUCCESSFUL EFFORTS FOR ITS SUPPRESSION.

Consul Masterson, of Aden, forwards a report by Surg. Major Prall, of the Indian Army, in regard to the suppression of bubonic plague that visited Aden during the winter of 1904. The consul makes a synopsis of this report as follows:

For several years past the government of India and many of the physicians of that country have been trying to get the entire population of infected districts to submit to vaccine inoculation as a preventive of plague. At first there was but little, if any, real objection to it among the people, but just about the time it was needed the worst to stay the awful ravages of the plague, through the carelessness of some one, a lot of inoculated patients died of tetanus, and this gave it such a setback that for some time the people would have nothing to do with the remedy, and many even asserted that it was not a preventive. But since then the government has provided a specially instituted laboratory at Bombay, where this vaccine is prepared and where it is impossible to become contaminated with outside poison. Again strenuous efforts are being made to get the people to submit to inoculation, as from experience and results this seems to be the only remedy that in any manner diminishes the ravages of this disease.

Major Prall, the surgeon in charge of the medical corps during plague at this place, resorted entirely to the use of the vaccine virus in making a fight against the disease, and it is not too much to say that his efforts and that of his assistants have met with the most gratifying results. This experience will doubtless go far toward softening and clearing away the prejudice of the people of India against the inoculation theory, and will strengthen the inoculation campaign that is now going on for the suppression of the plague. Major Prall's report embraces three distinct communities. The first of these includes the general population of the Crater (old Aden) with its large proportion of coolies, earning from 6 to 10 annas (12 to 20 cents) per day, so poor and ignorant as to be beyond the control of ordinary sanitary measures. The people were induced to be inoculated by the offer of a reward, and between the middle of December and the end of January 8,000 persons, representing one-half of the population, were inoculated. The results are best given in Major Prall's own words: "Within two months the deaths fell off nearly one half, and within four months the plague had ceased, the last two months of its life being attended by an insignificant mortality."

CAMPAIGN OF INOCULATION.

It is instructive and most convincing to examine the results of the inoculation campaign in the Crater upon the admissions to the plague hospital. Between December 19 and April 30 there were 363 admissions with 163 deaths of uninoculated persons, and 21 admissions and 7 deaths of inoculated persons. Now one-half of the Crater population had been inoculated. Consequently if the vaccine exercised no pro-

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tective effect, the ratio of cases among inoculated and uninoculated would have been equal. Instead we find that out of an inoculated population of 8,500, only 21 cases were treated, and of these 14 recovered.

In the case of the Aden prison the results are even more striking. The presence of infection was evident by the frequent discovery of dead rats. The only preventive measure adopted was the inoculation of all prisoners and wardens. Yet only 2 cases of plague developed. One was that of a man who declared that he had been inoculated, but probably had not; the other, through negligence, was not inoculated until eleven days after admission and after he had developed plague.

Finally there was the Aden troop at Khore-Macksar, where the epidemic was arrested almost immediately by the adoption of systematic inoculation. The figures given in Major Prall's report by no means cover the entire plague reports of Aden during the time it was infected, but only two districts. The total number of plague cases reported for the whole locality embraced as Aden were 2,287 and 1,977 deaths, but throughout all the sections of the place inoculation was practiced by the doctors and nurses with the same good results as attended the efforts of Major Prall at the Crater.

SALE OF PATENT MEDICINES.

BUSINESS CONDUCTED UNDER POLICE REGULATIONS.

Consul Alger, of Tegucigalpa, reports that there are no regulations or restrictions in Honduras as to the sale of patent medicines. With regard to pharmacy, articles that may be used are specified in the penal code and police regulations under which business must be done. The consul sends the substance of these regulations, which follow:

No prescription shall be filled unless clearly written in the Spanish language, without abbreviations, except those in common use as regards the method of preparation, and must be signed by a regular doctor of medicine.

All prescriptions that are filled must be sealed and numbered, with number corresponding to that of the register kept by the pharmacist, returning to the interested party the original prescription or a sealed and numbered copy of same.

When in the judgment of the pharmacist the filling of a prescription which calls for the largest doses of a drug that might be prejudicial in taking, he will return the same under seal to the physician who issued it, calling on him to accept over his signature all responsibility.

No prescription shall be filled a second time. The physician ordering its repetition shall state how many times repetition is necessary. The prescription is to be dated each time it is put up, adding initials—Rp-a-i (recipe ad integran).

Violation of any of the regulations is punished with a fine of from $50 to $500, and closing of the pharmacy in case of further offense.

The commission is constituted or composed of the inspector of hygiene, one pharmacist, and the agent of police to revise the books and inspect the condition and quality of drugs and medicines. The medical faculty is informed of the result of revision and inspection.

The sale of medicines is positively forbidden at any place except an authorized pharmacy.

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SPREAD OF CHOLERA.

INVESTIGATIONS BY A FRENCH SCIENTIST.

Consul-General Guenther, of Frankfort, Germany, makes the following report on the result of observations made by a French chemist on the spread of cholera:

At a session of the Paris Academy of Medicine, held October 17 last, Professor Chantemesse reported minute and careful observations made by him with reference to the spread of cholera. He stated that in view of the immense movement of persons and goods at the ports it is absolutely impossible to exercise a prophylactic examination with the required care. There is not sufficient time at the various ports to closely look into every corner of the ships. With reference to the spread of cholera by persons from exotic countries the following figures will be found important: Upon 4,000 vessels passing through the Suez Canal carrying crews of 200,000 men and 500,000 passengers only 13 cholera cases were found, but from these figures no certain and quieting conclusions should be reached. It must not be overlooked that there are three kinds of cholera cases, namely: Sudden cases where the disease breaks out within two or three days, slower ones where thirty days elapse after leaving the infected places, and cases where the disease does not break out at all in spite of the fact that certain persons carry the cholera bacillus in their intestines. The very fact of the slowness of incubation renders this class so fearfully dangerous.

For the spread of cholera certain animals and parasites, as rats, mosquitoes, and flies, are especially active. The infection through flies is exceedingly common, and through experiments in the laboratory it has been established that these insects take up and transfer the cholera bacillus very easily. Professor Chantemesse concluded his remarks with the request to preach everywhere, and also advertise that to housekeepers it is a greater reproach to have flies in their dwellings than bedbugs.

SALE OF QUININE.

Consul Rairden, of Batavia, reports the result of the eighth public sale of quinine held in that city for the year 1905, from which it appears that there were put up for sale 5,229.60 kilograms, which is equal to about 11,505 pounds sulphate of quinine of Editio 1 1, packed in cases containing each 400 ounces, and about 240 kilograms (528 pounds) with packing at purchaser's option. Of the entire lot put up for sale only 117.36 kilograms, or 258 pounds, found purchasers at $5.99 per kilogram (2.2 pounds), the remainder being held back on account of low bids. The price realized equals the unit price of $0.021 for the bark.

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FIRE PROTECTION.

MACHINE FOR SAVING LIFE.

URGENT CALL FOR CHEMICAL EXTINGUISHERS.

NEW INVENTION TO BE PLACED ON EXHIBITION IN UNITED STATES—APPARATUS WANTED IN CHINA AND GREECE.

Consul Brittain, of Kehl, furnishes the following description of an ingenious device for removal of persons and property from burning buildings:

A new model of a portable fire escape invented by Mr. Wilhelm Lampé, of Baden-Baden, will soon be taken to New York for the pur-

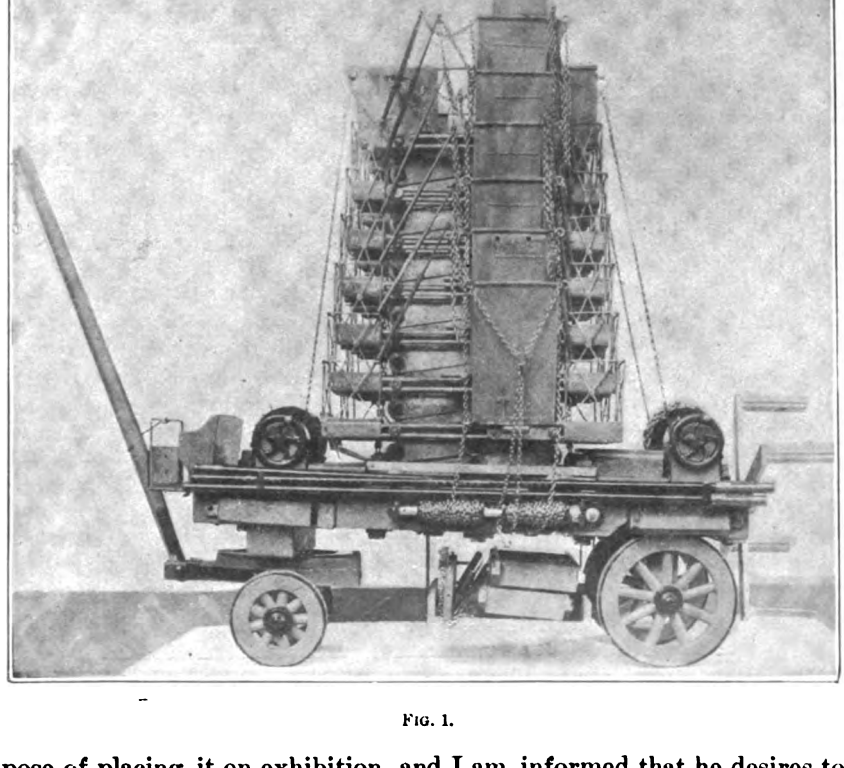

FIG. 1.

pose of placing it on exhibition, and I am informed that he desires to dispose of his patents in the United States and have the fire escapes manufactured there. The apparatus is a portable fire escape built on

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a wagon or trucks. It is provided with a number of extendable platforms which can be set according to the heights of the floors of the building from which the people are to be rescued. It is also supplied with a double arrangement of ladders and with the necessary number

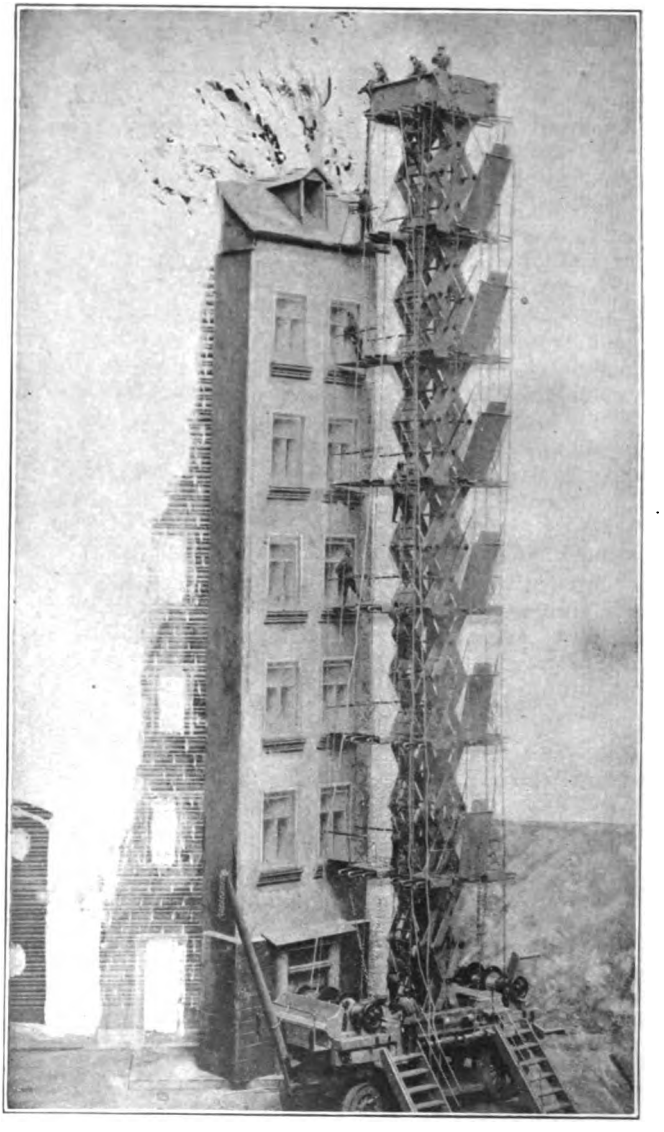

FIG. 2.

of railed safety bridges which can be let down and put together. These are to assist in the rescue work and in removing furniture from burning buildings. The entire fire escape with appliances may be placed in service in a few minutes. It can also be used in making military observations and for searchlights.

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A framework of lazy-tongs is constructed in such a manner that the external places of junction of every second pair of legs are adjusted to serve as supports for the platform. These platforms can be put up at the various heights of the floors of a burning building, and a gangway is hinged to each platform. By the aid of these gangways persons are enabled to pass from the windows of a burning building to the main platform, and then descend by the aid of a rope ladder. When in operation the gangways may be let down collectively by a single movement, so as to stand out horizontally, with their outer edges or ends laid upon the window ledges of the different floors of a building. The entire framework of the portable tower or fire escape may be folded up and placed in a comparatively small space. When the tower has been adjusted ready for use it is kept in position by a system of rods made of tubing and attached to the framework in a manner which makes the tower very substantial. Figure 1 shows the fire escape on the wagon or truck ready to be elevated according to the height required. Figure 2 shows the fire escape or tower ready for work by the side of a burning building.

GREECE.

FIRE EXTINGUISHERS IN DEMAND.

Consul Horton, of Athens, in response to numerous inquiries from American manufacturers of fire appliances, and especially of extinguishers, writes that apparatus of this kind, and particularly chemical extinguishers, could be sold in Greece if proper efforts were made by manufacturers. He writes:

There are many fine buildings in Athens and the outlying districts, both public and private, and the provisions for fighting fire are very inadequate. It must be that men sufficiently wealthy to erect expensive residences, schools, or hospitals would be open to arguments in favor of means to protect them against fire. American ingenuity is greatly respected in this country, and the words "American invention" are themselves a good introduction. Only a few years ago, for example, fly paper was unknown here, and now one sees American fly paper in nearly every shop window and in a great many of the houses.

Chemical fire extinguishers are practically unknown here and the field is open. Not even in the royal or municipal theaters, nor in the various palaces of the royal families, do such things exist. At one time hand grenades were to be found in some of the public buildings, but they have been discarded as useless.

MEN AND METHODS INADEQUATE.

The fire brigades of Athens, Piraeus, and Patras are composed of men detailed from the regular army, who receive the ridiculous wage of 10 lepta, or about one cent and a half per day! This of course is in addition to clothes and keep. One hundred and twenty men, including officers, are assigned to Athens, 10 to Piraeus, and 10 to Patras. In the other cities of the Kingdom it is the duty of the municipal authorities to engage firemen. The population of Athens is 180,000,

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of Piraeus 60,000, and of Patras 40,000. A marine officer from the navy-yard has in charge the mechanical working of the engines, and this man receives a salary of 120 drachmas besides 30 from the fire department and an additional 60 contributed by the eight fire insurance companies of Athens.

The fire appliances of the city of Athens are, roughly speaking, as follows: One Merryweather steam engine, of the English pattern, donated by the Ethniki (Greek) Fire Insurance Company. This engine throws water to a height of 25 meters, with a maximum steam pressure of 100 pounds. Eight hand pumps (French and German), drawn either by horses or by men, extension ladders, ladders with hooks, canvas tubes, etc.

But the most typical equipment of the Athens fire department consists in 25 iron carts fitted with iron barrels holding each 500 okes (187½ gallons) of water, which in case of need are driven to those parts of the city where hydrants do not exist. These barrels afford the only protection to a large portion of the city, inasmuch as there are only 20 hydrants in the town.

Piraeus and Patras each boast of a steam fire engine, while there are two others at the Salamis navy-yard, besides a stationary engine of American make. The beautiful city of Corfu is protected by one hand pump. In a large majority of the cities of the Kingdom the water supply is inadequate, and in almost every instance where plenty of water exists fire-fighting appliances are not to be found. Such are the general conditions of fire extinguishing in Greece, which lead me to believe that there should be a market here for a good American appliance—one that could be used in case of emergency by whoever happened to be on the spot. It would be necessary, of course, for the agent to be here with his extinguisher, and to give public demonstrations of its efficiency.

CHINA.

MACHINES FIND READY SALE.

In reply to inquiries regarding the use of fire extinguishers in Shanghai, Consul-General Rodgers writes:

The construction of native houses in Shanghai, as well as in nearly all other large Chinese cities, being principally wooden, renders the danger of destructive fires great and as a consequence, through the desire of the people themselves and by reason of the demands of the insurance companies, there has been quite a large sale of fire extinguishers of many kinds. Nearly every foreign and many native importing houses handle these extinguishers and several agents are constantly at work. The losses from fires in Shanghai are heavy, and yet, under the careless methods of the Chinese as to protection from fire, it is remarkable that the amount is not much greater. No accurate statistics in regard to this fire loss are obtainable. It is to be believed that the Chinese will welcome improved fire fighting apparatus, although one gains the impression by viewing their daily life and observing their habits as to fire producing agencies that they are indifferent to the results. The only fire protection of the international settlement at the present time is the volunteer fire brigade, the municipal waterworks, and the various patent extinguishers.

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MISCELLANEOUS.

EXPORT TRADE OF THE UNITED STATES.

LARGE INCREASE IN MANUFACTURED PRODUCTS—COTTON GOODS HEAD THE LIST.

A bulletin issued by the Bureau of Statistics, Department of Commerce and Labor, states that in the ten months ending with October last the importations of materials for use in manufacturing formed 47.8 per cent of the imports of the country, against 45.8 per cent in the corresponding period of last year, and that the exports of manufactures formed 38.2 per cent of the total domestic exportations, against 36.7 per cent in the corresponding months of 1904. The increase in the importation of manufacturers' materials amounts to $81,000,000, an increase of 21 per cent over the corresponding period of last year, while the increase in all other imports amounts to but $54,000,000, an increase of 12 per cent over the corresponding months of last year. In exports the increase of manufactures is $58,000,000, or 14 per cent, while the gain of all other exports is but $49,000,000, an increase of 7 per cent.

The largest increases in exports are in cotton cloths, copper, manufactures of iron and steel, and leather and its manufactures. Of cotton cloths the exports during the first ten months of 1905 are $39,000,000 in value, against a little less than $19,000,000 in the same months of last year; of copper, $72,000,000 in value, against a little less than $61,000,000 in the corresponding months of last year; iron and steel, $115,000,000, against $105,000,000 in the same months of last year; and leather, $32,500,000, against $28,750,000 in the same months of last year. Mineral oil shows a decrease of about $1,500,000 in value of exports during the ten months ending with October, 1905, as compared with the same months of last year, though there is a marked increase in the quantity exported meantime. The total value of mineral oil exported during the first ten months of the present year is given at $66,500,000, against $68,000,000 in the corresponding months of 1904, while the quantity exported in the ten months of 1905 is 1,025,000,000 gallons, against 854,000,000 in the corresponding months of last year. The $20,000,000 gain in exports of cotton cloths occurs almost exclusively in the exports to China, which in the ten months ending with October, 1905, amount to $27,500,000, against $9,500,000 in the corresponding months of 1904.

DIAMOND TRADE.

DEMAND FAR AHEAD OF THE SUPPLY.

Consul Hill, of Amsterdam, furnished the following report, which will aid dealers in and purchasers of diamonds:

With the termination of the strike of 1904, and the riddance of all the unpleasant factors to which it gave birth, the year 1905 started in under very promising conditions. The new schedules of the work-

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men's wages, which went into effect at the beginning of the present year, are almost forgotten and simply exist in word only, as since that time manufacturers have been compelled to raise their employees' wages again and again in order to get their goods out as fast as possible. It no longer seems to be a question of wages but a question of production of goods, which have become a very scarce article indeed.

With the beginning of the new year buyers from every part of the globe have come here in order to supply their demands and this influx has kept up to the present time. From every country orders are received daily, which can not receive any attention until previous orders have been filled. All the factories are working to their utmost capacity in order to satisfy their clients, as invariably the goods are bought up in the rough long before they are finished. Especially in small goods have the workmen's wages brought about such a change during the last eight months that the goods deserve extra mention, prices in some instances having increased as much as 40 per cent. Strange as it may seem, even these goods are conspicuous by their absence and are readily bought up at even higher figures whenever shown.

The steady demand for the rough as well as the cut material finally culminated in the advance of all rough goods of about 5 per cent toward the end of August by the London syndicate, but even this advance failed to stop the tide of the ever-increasing amount of orders which came pouring into Amsterdam. To-day there are again rumors in the air of prospective rises, but only the future will tell whether these reports are well founded or not.

CATTLE IN THE WORLD.

EXTENT AND DISTRIBUTION OF THE MEAT SUPPLY.

Consul Brittain, of Kehl, reports a movement in Germany to make that country safe in the matter of its meat supply. The municipalities are engaged in the consideration of a proposition that would make the raising of cattle largely a municipal matter. The proposition is for cities to establish cattle farms for their own supply. He writes:

The papers are suggesting various remedies to overcome the meat crisis. One suggestion is that the municipalities—for in the cities the famine is most severe and felt the most by the population—run ranches, especially for the raising of swine, and thus, should a meat famine or crisis arise, the city government would be in a position to supply the butchers with meat, thus preventing the tendency to high or exorbitant prices. Many German cities own and control slaughterhouses in which all the cattle are slaughtered under municipal supervision, and to which the butchers go for their daily supply of meat.

By comparison it is observed that Austria-Hungary possesses 14,000,000 head of cattle; France, 15,000,000; Switzerland, 1,300,000, and European Russia, 36,000,000. The above figures show that the various countries possess about one-third as many cattle as the total number of their population. France, however, has more. The indications are that the neighboring European countries can aid Germany with only a limited amount of beef, and that consequently Germany will have to import from beyond the seas.

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The butchers of Strassburg went recently to Belfort, France, about 100 miles from Strassburg, to buy cattle; and as the law forbids the importation of live cattle they butchered what they bought in Belfort and shipped to Strassburg.

Not only is the scarcity of beef perceptible, but pork and swine are scarce. The statistics credit North America with the possession of 48,700,000 swine, Germany with 16,800,000, European Russia with 12,600,000, France with 5,500,000, Hungary with 6,500,000, Austria with 4,700,000, England with 3,400,000, Italy with 1,800,000, Roumania with 1,700,000, Denmark with 1,500,000, Belgium with 1,200,000, Australia with 1,200,000, Servia with 940,000, and Japan, Sweden, and the Netherlands each with 700,000 to 800,000 head.

CHINESE EMIGRANTS.

THEIR DISTRIBUTION IN FOREIGN LANDS.

Consul-General Rodgers, of Shanghai, furnishes a table which shows the number of Chinese who have emigrated to other countries. He says:

Much interest has been attracted in China recently by the publication of statistics of Chinese emigration. According to these statistics, the source and authenticity of which can not be well established, the total of Chinese in foreign countries is 7,642,650, distributed as follows:

Formosa	2,600,000	Philippines	80,000
Siam	2,500,000	Macao	74,568
Malay Peninsula	985,000	Burmah	40,000
Sunda Islands	600,000	Australia	30,000
Hongkong	274,534	Asiatic Russia	25,000
All America	272,829	Japan	7,000
Indo-China	150,006	Korea	3,713

It is not claimed that these figures are accurate, the admission being freely made that they are approximate, and that they are now subject to much revision. However, they are being used to show that only about 2 per cent of China's estimated population has emigrated, and that remote nations have no cause for complaint on the score of Chinese invasion. No reference is made as to what would be the result if there were no exclusion laws in the various countries.

FOREIGNERS IN CHINA AND JAPAN.

According to Export, a leading German trade paper, there were 20,560 foreigners in China at the outbreak of the Russo-Japanese war. The number of foreigners in the Orient is constantly increasing. The 20,560 were divided as follows: English, 5,662; Japanese, 5,287; Americans, from the United States, 2,512; Portuguese, 1,930; Germans, 1,658; French, 1,213; Russians, 361; Italians, 313; Belgians, 311; Danes, 236; Dutch, 224; Austrians, 172; Swedes, 120; Norwegians, 106; Koreans, 22; all others, 64. Of the houses engaged in trade the English had 420, the Japanese 361, Germans 159, Americans 114, French 71, Portuguese 45, Spaniards 29, Russians 24, Austrians 18, Italians 18, Dutch 15, Danes 10, Norwegians 7, Belgians 3, Swedes 2, Swiss 1.

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At the outbreak of the war Japan had the following foreigners inside her gates: English, 2,136; Americans, 1,639; Germans, 654; French, 564; Russians, 204; Portuguese, 178; Swiss, 121; Dutch, 95; Austrians, 59, Belgians, 39.

ROAD DUST.

METHODS FOR SUPPRESSION.

Consul Keene, of Geneva, makes the following report regarding efforts that have been made at Geneva and other points in Switzerland to suppress the annoyance resulting from dust raised on roads traveled by motor cars. The consul says:

Motor-car dust is a perennial pest which renders living in suburban and country houses situated on important roads most unhealthy and uncomfortable. I am informed that it has been found impossible of late to either lease or sell certain villas in the French Riviera, and that the paradise of the motorist has become the inferno of the inhabitant. Public opinion in Switzerland, desiring to put a stop to a state of affairs so objectionable, founded in 1904 the Swiss league against road dust, and already good results are shown. After several trials on different roads and streets in Geneva, both the cantonal and municipal authorities applied antidust preparations on 36,000 square meters of road (110,610 square feet). The spring was most unfavorable for antidust applications, and the material and preparations were not obtained by the authorities until the middle of August last.

The preparations mostly used have been hot coal tar and, in a less quantity, hot "Lambercier asphaltine" (manufactured in Geneva), which is found efficient but expensive, and gas tar with water. Westrumite and apulvite have not given the good results which were expected. In general, however, the results have been satisfactory, and the treatment will be continued next year. Private proprietors have also applied antidust preparations on the busy roads passing their country houses.

ALUMINUM.

GROWTH OF PRODUCTION.

The following data show the growth of the world's aluminum production and the reduction in price. The kilogram is equal to 2.2 pounds.

Year.	Tons.	Value per kilogram.
1878	2	$19.30
1886	16	19.30
1889	70	9.65
1891	333	.965
1894	1,240	.965
1896	1,800	.965
1897	3,400	.85
1899	5,300	.78
1900	7,300	.48

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The production of the last few years has kept pace with the demand of existing factories, which are multiplying the products manufactured from it. One European firm has sold its entire output for an unlimited time, and consequently will receive no new orders. Should this intense demand continue, the price will certainly increase. Already, according to reliable information, it has gone up a slight degree. It is quoted this year at 82 cents per 2.2 pounds, whereas the price in 1900 was 48 cents.

APPLE ORCHARDS.

METHODS FOR THEIR RESUSCITATION.

Consul Mahin, of Nottingham, forwards a report based upon publications in German newspapers describing experiments looking to the improvement of declining apple orchards:

Of five long rows of apple trees one row was left untreated and the four others had different combinations of manurings. The row left unmanured gave 104 pounds of apples per tree during the five years from 1900 to 1904, both inclusive, and in the fifth year (1904), which was the year of maximum yield for the entire orchard, the weight of the apples per tree was 55 pounds and the number 294. The best results from manuring were obtained by a complete manure, consisting of 1⅛ pounds of sulphate of ammonia, 1⅛ pounds of muriate of potash, and 3½ pounds of basic slag per tree per annum, applied to the roots during the winter. During the five years the yield per tree from this dressing was 163 pounds of apples, while by the fifth year the bearing increased to 401 apples, weighing 105 pounds, per tree—that is, the weight of the apples per tree increased by this manuring from 55 pounds on the unmanured trees to 105 pounds on the manured trees, or 90.9 per cent; while the number of apples increased from 294 to 401 per tree, or 36 per cent. The increase in the average size of the apples is remarkable. Those from the unmanured trees averaged 2.98 ounces each, and those from the manured trees 4.19 ounces each.

In a corresponding experiment with pears (Josephine de Malines) similar results were obtained with a dressing consisting of 3 pounds of nitrate of soda, 2¼ pounds of muriate of potash, and 5 pounds of basic slag per tree. In 1904 the yield was 14¾ pounds per tree from the unmanured trees and 80¾ pounds per tree from those manured with the mixture.

AMERICAN APPLES IN GERMANY.

Consul Brittain, of Kehl, reports that the shortage in the apple crop in Germany last fall has resulted in a demand for American green apples. He writes:

Several carloads have been purchased for the local markets here, and I believe there is a good opening for more extensive shipments. These apples should be carefully selected and packed, using such varieties and sizes as will best stand transportation and present a good appearance when offered for sale. Much of the fruit offered for sale

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in Germany is packed in boxes containing about 40 to 50 pounds each, with each apple wrapped in tissue or other thin paper. When packed this way the fruit commands a higher price and arrives in a much better condition. I would suggest that parties correspond with Herr Leo Gussone, Kronenburgerstrasse 6, Strassburg, Germany. There does not appear to be much difficulty in getting the fruit into Germany. It can be sent to either Antwerp, Rotterdam, Hamburg, or Bremen.

JUVENILE DEPRAVITY.

CHILD CRIMINALS MANUFACTURED.

Consul Brittain, of Kehl, Germany, furnishes some startling statistics on juvenile crime in Italy, taken from an article recently published and written by Lino Ferriani. He says that 80 per cent of the child criminals of Italy are manufactured by bad environment and inadequate education—in other words, by preventable causes; that 30 per cent of the criminals of the country are minors, and of these 85 per cent are thieves.

Professor Ferriani protests against sentimental description, but pleads for scientific investigation. He himself has closely studied 500 boy prisoners between the ages of 11 and 14, and reports that more than half of them came from the most wretched homes, and over 200 had criminal parents. Very few had ever done any work, all were sexually corrupt, nearly all smoked, and many had a taste for alcohol.

As a proof of how little good is effected by mere instruction apart from moral training he asserts that the best scholars were among the worst offenders. As an alternative to prison the author proposes agricultural colonies in districts where the air is bracing, with good food and outdoor work, kindly discipline, and the supervision of an experienced physician.

NOVEL FOOTWEAR.

SHOES FOR SOLDIERS MADE FROM ASBESTOS.

Consul-General Guenther, of Frankfort, reports a novel footwear made of asbestos. It is supposed to save soldiers from the sensitiveness of the skin so often the cause of inconvenience in the past to armies on the march. He writes:

Doctor Hogyes, an Hungarian army physician, has demonstrated by thorough investigations that the marching ability of soldiers, which is the most important requirement for an army in the field, is less endangered by fatigue than through the sensitiveness of the skin of the feet against leather. This sensitiveness, which has heretofore been well recognized, the Hungarian physician has tried to avoid by a peculiar remedy, namely, through lining, or socks, of asbestos. The Hungarian army has already adopted this innovation, and it is now proposed to put the article upon the market for the public. The asbestos industry may thereby find a new use for its product.

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VALUES OF FOREIGN COINS AND CURRENCIES.

[As given by the Director of the United States Mint and published by the Secretary of the Treasury, January 1, 1906.]

COUNTRIES WITH FIXED CURRENCIES.

Countries.	Monetary unit.	Value in U.S. gold, 1905.	Coins.
Argentina	Peso	$0.96,5	Gold—argentine ($4.82,4) and ½ argentine; silver—peso and divisions.
Austria-Hungary	Crown	.20,3	Gold—20 crowns ($4.05,2) and 10 crowns.
Belgium	Franc	.19,3	Gold—10 and 20 francs; silver—5 francs.
Brazil	Milreis	.54,6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
British N. A. (except Newfoundland).	Dollar	1.00	
British Honduras	....do	1.00	
Chile	Peso	.36,5	Gold—escudo ($1.825), doubloon ($3.65), and condor ($7.30); silver—peso and divisions.
Colombia	Dollar	1.00	Gold—condor ($9.647) and double condor; silver—peso.
Costa Rica	Colon	.46,5	Gold—2, 5, 10, and 20 colons ($9.30,7); silver—5, 10, 25, and 50 centisimos.
Cuba	Peso	.91	Gold—doubloon ($5.01,7); silver—peso (60 cents).
Denmark	Crown	.26,8	Gold—10 and 20 crowns.
Ecuador	Sucre	.48,7	Gold—10 sucres ($4.8665); silver—sucre and divisions.
Egypt	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.
Finland	Mark	.19,3	Gold—10 and 20 marks ($1.93 and $3.85,9).
France	Franc	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Mark	.23,8	Gold—5, 10, and 20 marks.
Great Britain	Pound sterling	4.86,6½	Gold—sovereign (pound sterling) and half sovereign.
Greece	Drachma	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	Gourde	.96,5	Silver—gourde.
India	Pound sterling[a]	4.86,6½	Gold—sovereign (pound sterling); silver—rupee and divisions.
Italy	Lira	.19,3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Japan	Yen	.49,8	Gold—1, 2, 5, 10, and 20 yen.
Liberia	Dollar	1.00	
Mexico	Peso	.49,8	Gold—5 and 10 pesos; silver—peso and divisions.
Netherlands	Florin	.40,2	Gold—10 florins; silver—½, 1, and 2½ florins.
Newfoundland	Dollar	1.01,4	Gold—$2 ($2.02,7).
Norway	Crown	.26,8	Gold—10 and 20 crowns.
Panama	Balboa	1.00	Gold—1, 2½, 5, 10, and 20 balboas; silver—peso and divisions.
Peru	Libra	4.86,6½	Gold—libra ($4.8665); silver—sol and divisions.
Philippine Islands	Peso	.50	Silver—peso, 50, 20, and 10 centavos.
Portugal	Milreis	1.08	Gold—1, 2, 5, and 10 milreis.
Russia	Ruble	.51,5	Gold—imperial ($7.718) and ½ imperial ($3.859); silver—¼, ½, and 1 ruble.
Spain	Peseta	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden	Crown	.26,8	Gold—10 and 20 crowns.
Switzerland	Franc	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Piaster	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Uruguay	Peso	1.03,4	Gold—peso; silver—peso and divisions.
Venezuela	Bolivar	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

COUNTRIES WITH FLUCTUATING CURRENCIES.[b]

Country and monetary unit.	Apr. 1, 1905.	July 1, 1906.	Oct. 1, 1905.	Jan. 1, 1906.
	Cts.	Cts.	Cts.	Cts.
Bolivia:				
Silver boliviano	43.9	42.2	44.1	46.5
Central America:				
Silver peso	43.9	42.2	44.1	46.5
China:				
Amoy tael	71.9	69.1	72.4	76.3
Canton tael	71.7	68.9	72.2	76.0
Chifu tael	68.8	66.1	69.2	72.9
Chinkiang tael	70.3	67.5	70.7	74.5
Fuchau tael	66.5	63.9	66.9	70.5
Haikwan (customs) tael	73.2	70.3	73.6	77.6
Hankau tael	67.3	64.7	67.7	71.3
Hongkong tael	(c)	(c)	(c)	(c)
China—Continued.				
Hongkong dollar	.....	.....	.....	50.2
Kiaochon	.....	.....	.....	75.3
Nankin tael	71.2	68.4	71.6	75.5
Ningpo tael	69.1	64.8	.....	73.3
Niuchwang tael	67.4	66.4	67.9	71.5
Peking tael	70.1	67.4	70.6	74.3
Shanghai tael	65.7	63.1	66.1	69.6
Swatow tael	66.4	63.8	66.9	70.4
Takau tael	72.4	69.5	72.8	76.7
Tientsin tael	69.7	67.0	70.1	73.9
Persia:				
Silver kran	8.1	7.8	8.1	8.6

[a] The rupee, $0.3244½, 15 to the sovereign, constitutes the money of account.

[b] The coins of silver-standard countries are valued by their pure silver content at the average market price of silver for the three months preceding the date of the circular issued by the United States Treasury Department.

[c] The "British dollar" has the same legal value as the Mexican dollar in Hongkong and Labuan.

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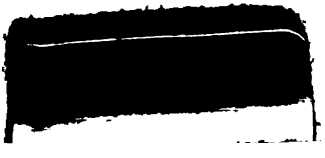

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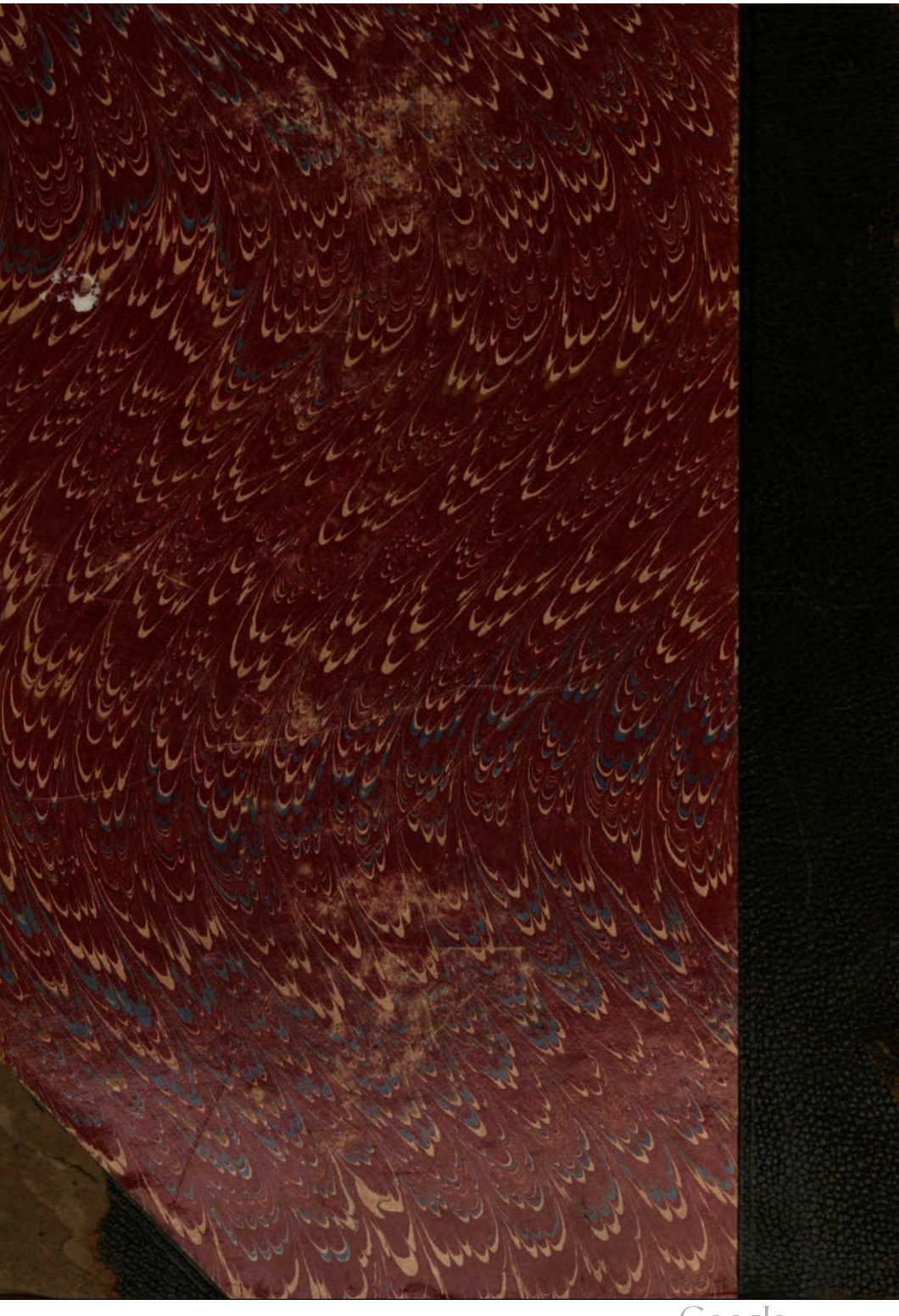
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